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Tables of Compound-Discount Interest Rate Multipliers for Evaluating Forestry Investments

Allen L. Lundgren

NORTH CENTRAL FOREST EXPERIMENT STATION
FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

The author is a Principal Economist for the Station at their Headquarters Laboratory in St. Paul, Minnesota. The Laboratory is maintained in cooperation with the University of Minnesota.

North Central Forest Experiment Station
D. B. King, Director
Forest Service – U.S. Department of Agriculture
Folwell Avenue
St. Paul, Minnesota 55101

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TABLES OF COMPOUND-DISCOUNT INTEREST RATE MULTIPLIERS FOR EVALUATING FORESTRY INVESTMENTS

Allen L. Lundgren

The following tables were prepared by computer for 10 selected compound-discount interest rate multipliers commonly used in financial analyses of forestry investments.[1/] A few of these tables are readily available in other publications, but some cannot be easily obtained by those evaluating forestry investments. To provide a single source for interest-rate tables with an identical format, even the most common tables are included here. These tables previously were issued by the North Central Station in 1965 and 1967 as a multilithed report.

There are two sets of tables for each of the 10 compound-discount multipliers. The first set gives multipliers for each year from 1 to 40 years; the second set gives multipliers at 5-year intervals from 5 to 160 years. Multipliers are given for 24 interest rates.

.005	.010	.015	.020
.025	.030	.035	.040
.045	.050	.055	.060
.070	.080	.090	.100
.110	.120	.130	.140
.150	.200	.250	.300

Each table is briefly explained and an example of its use is given.

1/ The computer program used in preparing these tables is a revised version of a program originally written by Dennis L. Schweitzer, formerly Associate Statistician, Lake States Forest Experiment Station. Dr. Schweitzer is now Principal Economist with the Pacific Northwest Forest and Range Experiment Station, USDA, Forest Service, Portland, Oregon. A listing of the revised program is available from the North Central Station.

Note

Multipliers equal to or greater than 1,000,000 exceed the column width available in the tables. These large multipliers are indicated by 999999.99999, and should be ignored.

Table 1.--Compounded Single Payment Multiplier

The value of a \$1 payment compounded for n years.

$$(1+i)^n$$

This multiplier is used to find the future value in n years (V_n) of a present payment or value (V_o), which may be a cost or an income, compounded annually for n years at the interest rate i.

To find the future value, multiply the present value by the multiplier for the rate i and years n desired:

$$V_n = V_o \left[(1+i)^n \right]$$

Example: Find the future value of a present investment of \$10 compounded for 20 years at an interest rate of 4 percent.

Present value: V_o = \$10

Interest rate: i = .04

Years: n = 20

Multiplier: = 2.19112 (page 6)

Future value: V_n = \$10 (2.1911) = \$21.91

Notes

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	1.00500	1.01000	1.01500	1.02000
2	1.01002	1.02010	1.03022	1.04040
3	1.01508	1.03030	1.04568	1.06121
4	1.02015	1.04060	1.06136	1.08243
5	1.02525	1.05101	1.07728	1.10408
6	1.03038	1.06152	1.09344	1.12616
7	1.03553	1.07214	1.10984	1.14869
8	1.04071	1.08286	1.12649	1.17166
9	1.04591	1.09369	1.14339	1.19509
10	1.05114	1.10462	1.16054	1.21899
11	1.05640	1.11567	1.17795	1.24337
12	1.06168	1.12683	1.19562	1.26824
13	1.06699	1.13809	1.21355	1.29361
14	1.07232	1.14947	1.23176	1.31948
15	1.07768	1.16097	1.25023	1.34587
16	1.08307	1.17258	1.26899	1.37279
17	1.08849	1.18430	1.28802	1.40024
18	1.09393	1.19615	1.30734	1.42825
19	1.09940	1.20811	1.32695	1.45681
20	1.10490	1.22019	1.34686	1.48595
21	1.11042	1.23239	1.36706	1.51567
22	1.11597	1.24472	1.38756	1.54598
23	1.12155	1.25716	1.40838	1.57690
24	1.12716	1.26973	1.42950	1.60844
25	1.13280	1.28243	1.45095	1.64061
26	1.13846	1.29526	1.47271	1.67342
27	1.14415	1.30821	1.49480	1.70689
28	1.14987	1.32129	1.51722	1.74102
29	1.15562	1.33450	1.53998	1.77584
30	1.16140	1.34785	1.56308	1.81136
31	1.16721	1.36133	1.58653	1.84759
32	1.17304	1.37494	1.61032	1.88454
33	1.17891	1.38869	1.63448	1.92223
34	1.18480	1.40258	1.65900	1.96068
35	1.19073	1.41660	1.68388	1.99989
36	1.19668	1.43077	1.70914	2.03989
37	1.20266	1.44508	1.73478	2.08069
38	1.20868	1.45953	1.76080	2.12230
39	1.21472	1.47412	1.78721	2.16474
40	1.22079	1.48886	1.81402	2.20804

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
1	1.02500	1.03000	1.03500	1.04000
2	1.05062	1.06090	1.07122	1.08160
3	1.07689	1.09273	1.10872	1.12486
4	1.10381	1.12551	1.14752	1.16986
5	1.13141	1.15927	1.18769	1.21665
6	1.15969	1.19405	1.22926	1.26532
7	1.18869	1.22987	1.27228	1.31593
8	1.21840	1.26677	1.31681	1.36857
9	1.24886	1.30477	1.36290	1.42331
10	1.28008	1.34392	1.41060	1.48024
11	1.31209	1.38423	1.45997	1.53945
12	1.34489	1.42576	1.51107	1.60103
13	1.37851	1.46853	1.56396	1.66507
14	1.41297	1.51259	1.61869	1.73168
15	1.44830	1.55797	1.67535	1.80094
16	1.48451	1.60471	1.73399	1.87298
17	1.52162	1.65285	1.79468	1.94790
18	1.55966	1.70243	1.85749	2.02582
19	1.59865	1.75351	1.92250	2.10685
20	1.63862	1.80611	1.98979	2.19112
21	1.67958	1.86029	2.05943	2.27877
22	1.72157	1.91610	2.13151	2.36992
23	1.76461	1.97359	2.20611	2.46472
24	1.80873	2.03279	2.28333	2.56330
25	1.85394	2.09378	2.36324	2.66584
26	1.90029	2.15659	2.44596	2.77247
27	1.94780	2.22129	2.53157	2.88337
28	1.99650	2.28793	2.62017	2.99870
29	2.04641	2.35657	2.71188	3.11865
30	2.09757	2.42726	2.80679	3.24340
31	2.15001	2.50008	2.90503	3.37313
32	2.20376	2.57508	3.00671	3.50806
33	2.25885	2.65234	3.11194	3.64838
34	2.31532	2.73191	3.22086	3.79432
35	2.37321	2.81386	3.33359	3.94609
36	2.43254	2.89828	3.45027	4.10393
37	2.49335	2.98523	3.57103	4.26809
38	2.55568	3.07478	3.69601	4.43881
39	2.61957	3.16703	3.82537	4.61637
40	2.68506	3.26204	3.95926	4.80102

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
1	1.04500	1.05000	1.05500	1.06000
2	1.09202	1.10250	1.11303	1.12360
3	1.14117	1.15762	1.17424	1.19102
4	1.19252	1.21551	1.23882	1.26248
5	1.24618	1.27628	1.30696	1.33823
6	1.30226	1.34010	1.37884	1.41852
7	1.36086	1.40710	1.45468	1.50363
8	1.42210	1.47746	1.53469	1.59385
9	1.48610	1.55133	1.61909	1.68948
10	1.55297	1.62889	1.70814	1.79085
11	1.62285	1.71034	1.80209	1.89830
12	1.69588	1.79586	1.90121	2.01220
13	1.77220	1.88565	2.00577	2.13293
14	1.85194	1.97993	2.11609	2.26090
15	1.93528	2.07893	2.23248	2.39656
16	2.02237	2.18287	2.35526	2.54035
17	2.11338	2.29202	2.48480	2.69277
18	2.20848	2.40662	2.62147	2.85434
19	2.30786	2.52695	2.76565	3.02560
20	2.41171	2.65330	2.91776	3.20714
21	2.52024	2.78596	3.07823	3.39956
22	2.63365	2.92526	3.24754	3.60354
23	2.75217	3.07152	3.42615	3.81975
24	2.87601	3.22510	3.61459	4.04893
25	3.00543	3.38635	3.81339	4.29187
26	3.14068	3.55567	4.02313	4.54938
27	3.28201	3.73346	4.24440	4.82235
28	3.42970	3.92013	4.47784	5.11169
29	3.58404	4.11614	4.72412	5.41839
30	3.74532	4.32194	4.98395	5.74349
31	3.91386	4.53804	5.25807	6.08810
32	4.08998	4.76494	5.54726	6.45339
33	4.27403	5.00319	5.85236	6.84059
34	4.46636	5.25335	6.17424	7.25103
35	4.66735	5.51602	6.51383	7.68609
36	4.87738	5.79182	6.87209	8.14725
37	5.09686	6.08141	7.25005	8.63609
38	5.32622	6.38548	7.64880	9.15425
39	5.56590	6.70475	8.06949	9.70351
40	5.81636	7.03999	8.51331	10.28572

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED FOR N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
1	1.07000	1.08000	1.09000	1.10000
2	1.14490	1.16640	1.18810	1.21000
3	1.22504	1.25971	1.29503	1.33100
4	1.31080	1.36049	1.41158	1.46410
5	1.40255	1.46933	1.53862	1.61051
6	1.50073	1.58687	1.67710	1.77156
7	1.60578	1.71382	1.82804	1.94872
8	1.71819	1.85093	1.99256	2.14359
9	1.83846	1.99900	2.17189	2.35795
10	1.96715	2.15892	2.36736	2.59374
11	2.10485	2.33164	2.58043	2.85312
12	2.25219	2.51817	2.81266	3.13843
13	2.40985	2.71962	3.06580	3.45227
14	2.57853	2.93719	3.34173	3.79750
15	2.75903	3.17217	3.64248	4.17725
16	2.95216	3.42594	3.97031	4.59497
17	3.15882	3.70002	4.32763	5.05447
18	3.37993	3.99602	4.71712	5.55992
19	3.61653	4.31570	5.14166	6.11591
20	3.86968	4.66096	5.60441	6.72750
21	4.14056	5.03383	6.10881	7.40025
22	4.43040	5.43654	6.65860	8.14027
23	4.74053	5.87146	7.25787	8.95430
24	5.07237	6.34118	7.91108	9.84973
25	5.42743	6.84848	8.62308	10.83471
26	5.80735	7.39635	9.39916	11.91818
27	6.21387	7.98806	10.24508	13.10999
28	6.64884	8.62711	11.16714	14.42099
29	7.11426	9.31727	12.17218	15.86309
30	7.61226	10.06266	13.26768	17.44940
31	8.14511	10.86767	14.46177	19.19434
32	8.71527	11.73708	15.76333	21.11378
33	9.32534	12.67605	17.18203	23.22515
34	9.97811	13.69013	18.72841	25.54767
35	10.67658	14.78534	20.41397	28.10244
36	11.42394	15.96817	22.25123	30.91268
37	12.22362	17.24563	24.25384	34.00395
38	13.07927	18.62528	26.43668	37.40434
39	13.99482	20.11530	28.81598	41.14478
40	14.97446	21.72452	31.40942	45.25926

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TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	1.11000	1.12000	1.13000	1.14000
2	1.23210	1.25440	1.27690	1.29960
3	1.36763	1.40493	1.44290	1.48154
4	1.51807	1.57352	1.63047	1.68896
5	1.68506	1.76234	1.84244	1.92541
6	1.87041	1.97382	2.08195	2.19497
7	2.07616	2.21068	2.35261	2.50227
8	2.30454	2.47596	2.65844	2.85259
9	2.55804	2.77308	3.00404	3.25195
10	2.83942	3.10585	3.39457	3.70722
11	3.15176	3.47855	3.83586	4.22623
12	3.49845	3.89598	4.33452	4.81790
13	3.88328	4.36349	4.89801	5.49241
14	4.31044	4.88711	5.53475	6.26135
15	4.78459	5.47357	6.25427	7.13794
16	5.31089	6.13039	7.06733	8.13725
17	5.89509	6.86604	7.98608	9.27646
18	6.54355	7.68997	9.02427	10.57517
19	7.26334	8.61276	10.19742	12.05569
20	8.06231	9.64629	11.52309	13.74349
21	8.94917	10.80385	13.02109	15.66758
22	9.93357	12.10031	14.71383	17.86104
23	11.02627	13.55235	16.62663	20.36158
24	12.23916	15.17863	18.78809	23.21221
25	13.58546	17.00006	21.23054	26.46192
26	15.07986	19.04007	23.99051	30.16658
27	16.73865	21.32488	27.10928	34.38991
28	18.57990	23.88387	30.63349	39.20449
29	20.62369	26.74993	34.61584	44.69312
30	22.89230	29.95992	39.11590	50.95016
31	25.41045	33.55511	44.20096	58.08318
32	28.20560	37.58173	49.94709	66.21483
33	31.30821	42.09153	56.44021	75.48490
34	34.75212	47.14252	63.77744	86.05279
35	38.57485	52.79962	72.06851	98.10018
36	42.81808	59.13557	81.43741	111.83420
37	47.52807	66.23184	92.02428	127.49099
38	52.75616	74.17966	103.98743	145.33973
39	58.55934	83.08122	117.50580	165.68729
40	65.00087	93.05097	132.78155	188.88351

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	1.15000	1.20000	1.25000	1.30000
2	1.32250	1.44000	1.56250	1.69000
3	1.52087	1.72800	1.95313	2.19700
4	1.74901	2.07360	2.44141	2.85610
5	2.01136	2.48832	3.05176	3.71293
6	2.31306	2.98598	3.81470	4.82681
7	2.66002	3.58318	4.76837	6.27485
8	3.05902	4.29982	5.96046	8.15731
9	3.51788	5.15978	7.45058	10.60450
10	4.04556	6.19174	9.31323	13.78585
11	4.65239	7.43008	11.64153	17.92160
12	5.35025	8.91610	14.55192	23.29809
13	6.15279	10.69932	18.18989	30.28751
14	7.07571	12.83918	22.73737	39.37376
15	8.13706	15.40702	28.42171	51.18589
16	9.35762	18.48843	35.52714	66.54166
17	10.76126	22.18611	44.40892	86.50416
18	12.37545	26.62333	55.51115	112.45541
19	14.23177	31.94800	69.38894	146.19203
20	16.36654	38.33760	86.73617	190.04964
21	18.82152	46.00512	108.42022	247.06453
22	21.64475	55.20614	135.52527	321.18389
23	24.89146	66.24737	169.40659	417.53905
24	28.62518	79.49685	211.75824	542.80077
25	32.91895	95.39622	264.69780	705.64100
26	37.85680	114.47546	330.87225	917.33330
27	43.53531	137.37055	413.59031	1192.53329
28	50.06561	164.84466	516.98788	1550.29328
29	57.57545	197.81359	646.23485	2015.38126
30	66.21177	237.37631	807.79357	2619.99564
31	76.14354	284.85158	1009.74196	3405.99434
32	87.56507	341.82189	1262.17745	4427.79264
33	100.69983	410.18627	1577.72181	5756.13043
34	115.80480	492.22352	1972.15226	7482.96956
35	133.17552	590.66823	2465.19033	9727.86043
36	153.15185	708.80187	3081.48791	12646.21855
37	176.12463	850.56225	3851.85989	16440.08412
38	202.54332	1020.67470	4814.82486	21372.10935
39	232.92482	1224.80964	6018.53108	27783.74216
40	267.86355	1469.77157	7523.16385	36118.86481

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
5	1.02525	1.05101	1.07728	1.10408
10	1.05114	1.10462	1.16054	1.21899
15	1.07768	1.16097	1.25023	1.34587
20	1.10490	1.22019	1.34686	1.48595
25	1.13280	1.28243	1.45095	1.64061
30	1.16140	1.34785	1.56308	1.81136
35	1.19073	1.41660	1.68388	1.99989
40	1.22079	1.48886	1.81402	2.20804
45	1.25162	1.56481	1.95421	2.43785
50	1.28323	1.64463	2.10524	2.69159
55	1.31563	1.72852	2.26794	2.97173
60	1.34885	1.81670	2.44322	3.28103
65	1.38291	1.90937	2.63204	3.62252
70	1.41783	2.00676	2.83546	3.99956
75	1.45363	2.10913	3.05459	4.41584
80	1.49034	2.21672	3.29066	4.87544
85	1.52797	2.32979	3.54498	5.38288
90	1.56655	2.44863	3.81895	5.94313
95	1.60611	2.57354	4.11409	6.56170
100	1.64667	2.70481	4.43205	7.24465
105	1.68825	2.84279	4.77457	7.99867
110	1.73088	2.98780	5.14357	8.83118
115	1.77459	3.14020	5.54109	9.75034
120	1.81940	3.30039	5.96932	10.76516
125	1.86534	3.46874	6.43066	11.88561
130	1.91244	3.64568	6.92764	13.12267
135	1.96073	3.83165	7.46304	14.48849
140	2.01024	4.02710	8.03981	15.99647
145	2.06100	4.23252	8.66116	17.66139
150	2.11305	4.44842	9.33053	19.49960
155	2.16640	4.67534	10.05163	21.52914
160	2.22111	4.91383	10.82846	23.76991

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	1.13141	1.15927	1.18769	1.21665
10	1.28008	1.34392	1.41060	1.48024
15	1.44830	1.55797	1.67535	1.80094
20	1.63862	1.80611	1.98979	2.19112
25	1.85394	2.09378	2.36324	2.66584
30	2.09757	2.42726	2.80679	3.24340
35	2.37321	2.81386	3.33359	3.94609
40	2.68506	3.26204	3.95926	4.80102
45	3.03790	3.78160	4.70236	5.84118
50	3.43711	4.38391	5.58493	7.10668
55	3.88877	5.08215	6.63314	8.64637
60	4.39979	5.89160	7.87809	10.51963
65	4.97796	6.82998	9.35670	12.79874
70	5.63210	7.91782	11.11283	15.57162
75	6.37221	9.17893	13.19855	18.94525
80	7.20957	10.64089	15.67574	23.04980
85	8.15696	12.33571	18.61786	28.04360
90	9.22886	14.30047	22.11218	34.11933
95	10.44160	16.57816	26.26233	41.51139
100	11.81372	19.21863	31.19141	50.50495
105	13.36614	22.27966	37.04561	61.44699
110	15.12256	25.82823	43.99856	74.75966
115	17.10978	29.94200	52.25649	90.95656
120	19.35815	34.71099	62.06432	110.66256
125	21.90197	40.23955	73.71294	134.63793
130	24.78007	46.64866	87.54785	163.80762
135	28.03637	54.07859	103.97938	199.29702
140	31.72058	62.69190	123.49489	242.47530
145	35.88893	72.67710	146.67318	295.00828
150	40.60503	84.25268	174.20173	358.92267
155	45.94086	97.67194	206.89701	436.68431
160	51.97787	113.22855	245.72875	531.29324

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
5	1.24618	1.27628	1.30696	1.33823
10	1.55297	1.62889	1.70814	1.79085
15	1.93528	2.07893	2.23248	2.39656
20	2.41171	2.65330	2.91776	3.20714
25	3.00543	3.38635	3.81339	4.29187
30	3.74532	4.32194	4.98395	5.74349
35	4.66735	5.51602	6.51383	7.68609
40	5.81636	7.03999	8.51331	10.28572
45	7.24825	8.98501	11.12655	13.76461
50	9.03264	11.46740	14.54196	18.42015
55	11.25631	14.63563	19.00576	24.65032
60	14.02741	18.67919	24.83977	32.98769
65	17.48070	23.83990	32.46459	44.14497
70	21.78414	30.42643	42.42992	59.07593
75	27.14700	38.83269	55.45420	79.05692
80	33.83010	49.56144	72.47643	105.79599
85	42.15846	63.25435	94.72379	141.57890
90	52.53711	80.73037	123.80021	189.46451
95	65.47079	103.03468	161.80192	253.54625
100	81.58852	131.50126	211.46864	339.30208
105	101.67414	167.83263	276.38105	454.06273
110	126.70447	214.20169	361.21898	607.63835
115	157.89683	273.38167	472.09876	813.15719
120	196.76817	348.91199	617.01420	1088.18775
125	245.20894	445.30993	806.41288	1456.24068
130	305.57496	568.34086	1053.94938	1948.77852
135	380.80199	725.36296	1377.46969	2607.90526
140	474.54856	925.76737	1800.29779	3489.96553
145	591.37385	1181.53983	2352.91721	4670.36113
150	736.95941	1507.97750	3075.16870	6249.99672
155	918.38550	1924.60387	4019.12250	8363.90548
160	1144.47542	2456.33644	5252.83237	11192.79224

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	1.40255	1.46933	1.53862	1.61051
10	1.96715	2.15892	2.36736	2.59374
15	2.75903	3.17217	3.64248	4.17725
20	3.86968	4.66096	5.60441	6.72750
25	5.42743	6.84848	8.62308	10.83471
30	7.61226	10.06266	13.26768	17.44940
35	10.67658	14.78534	20.41397	28.10244
40	14.97446	21.72452	31.40942	45.25926
45	21.00245	31.92045	48.32729	72.89048
50	29.45703	46.90161	74.35752	117.39085
55	41.31500	68.91386	114.40826	189.05914
60	57.94643	101.25706	176.03129	304.48164
65	81.27286	148.77985	270.84596	490.37073
70	113.98939	218.60641	416.73009	789.74696
75	159.87602	321.20453	641.19089	1271.89537
80	224.23439	471.95483	986.55167	2048.40021
85	314.50033	693.45649	1517.93203	3298.96903
90	441.10298	1018.91509	2335.52658	5313.02261
95	618.66975	1497.12055	3593.49715	8556.67605
100	867.71633	2199.76126	5529.04079	13780.61234
105	1217.01703	3232.17098	8507.11461	22193.81398
110	1706.92935	4749.11956	13089.25033	35743.35935
115	2394.05671	6978.01472	20139.43410	57565.03767
120	3357.78838	10252.99294	30987.01575	92709.06882
125	4709.47191	15065.01040	47677.36472	149308.88242
130	6605.27797	22135.44276	73357.53547	240463.44823
135	9264.24406	32524.22754	112869.66134	387268.78801
140	12993.58153	47788.76070	173663.96473	623700.25577
145	18224.17027	70217.36785	267203.53623	999999.99999
150	25560.34155	103172.35007	411125.76168	999999.99999
155	35849.70128	151594.03070	632567.94539	999999.99999
160	50281.06057	222741.36559	973284.19389	999999.99999

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	1.68506	1.76234	1.84244	1.92541
10	2.83942	3.10585	3.39457	3.70722
15	4.78459	5.47357	6.25427	7.13794
20	8.06231	9.64629	11.52309	13.74349
25	13.58546	17.00006	21.23054	26.46192
30	22.89230	29.95992	39.11590	50.95016
35	38.57485	52.79962	72.06851	98.10018
40	65.00087	93.05097	132.78155	188.88351
45	109.53024	163.98760	244.64140	363.67907
50	184.56483	289.00219	450.73593	700.23299
55	311.00247	509.32061	830.45173	1348.23881
60	524.05724	897.59693	1530.05347	2595.91866
65	883.06693	1581.87249	2819.02434	4998.21964
70	1488.01913	2787.79983	5193.86962	9623.64498
75	2507.39877	4913.05584	9569.36811	18529.50639
80	4225.11275	8658.48310	17630.94045	35676.98181
85	7119.56070	15259.20568	32483.86494	68692.98103
90	11996.87381	26891.93422	59849.41552	132262.46738
95	20215.43005	47392.77662	110268.66861	254660.08340
100	34064.17527	83522.26573	203162.87423	490326.23813
105	57400.11633	147194.77037	374314.42661	944081.28902
110	96722.53413	259407.47936	689650.06770	999999.99999
115	162983.09492	457164.61382	999999.99999	999999.99999
120	274635.99325	805680.25501	999999.99999	999999.99999
125	462777.62010	999999.99999	999999.99999	999999.99999
130	779807.20275	999999.99999	999999.99999	999999.99999
135	999999.99999	999999.99999	999999.99999	999999.99999
140	999999.99999	999999.99999	999999.99999	999999.99999
145	999999.99999	999999.99999	999999.99999	999999.99999
150	999999.99999	999999.99999	999999.99999	999999.99999
155	999999.99999	999999.99999	999999.99999	999999.99999
160	999999.99999	999999.99999	999999.99999	999999.99999

TABLE 1. COMPOUNDED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT COMPOUNDED
FOR N YEARS

YEARS	RATE OF INTEREST .150	.200	.250	.300
5	2.01136	2.48832	3.05176	3.71293
10	4.04556	6.19174	9.31323	13.78585
15	8.13706	15.40702	28.42171	51.18589
20	16.36654	38.33760	86.73617	190.04964
25	32.91895	95.39622	264.69780	705.64100
30	66.21177	237.37631	807.79357	2619.99564
35	133.17552	590.66823	2465.19033	9727.86043
40	267.86355	1469.77157	7523.16385	36118.86481
45	538.76927	3657.26199	22958.87404	134106.81671
50	1083.65744	9100.43815	70064.92322	497929.22298
55	2179.62218	22644.80226	213821.17681	999999.99999
60	4383.99875	56347.51435	652530.44680	999999.99999
65	8817.78739	140210.64692	999999.99999	999999.99999
70	17735.72004	348888.95693	999999.99999	999999.99999
75	35672.86798	868147.36931	999999.99999	999999.99999
80	71750.87940	999999.99999	999999.99999	999999.99999
85	144316.64699	999999.99999	999999.99999	999999.99999
90	290272.32521	999999.99999	999999.99999	999999.99999
95	583841.32764	999999.99999	999999.99999	999999.99999
100	999999.99999	999999.99999	999999.99999	999999.99999
105	999999.99999	999999.99999	999999.99999	999999.99999
110	999999.99999	999999.99999	999999.99999	999999.99999
115	999999.99999	999999.99999	999999.99999	999999.99999
120	999999.99999	999999.99999	999999.99999	999999.99999
125	999999.99999	999999.99999	999999.99999	999999.99999
130	999999.99999	999999.99999	999999.99999	999999.99999
135	999999.99999	999999.99999	999999.99999	999999.99999
140	999999.99999	999999.99999	999999.99999	999999.99999
145	999999.99999	999999.99999	999999.99999	999999.99999
150	999999.99999	999999.99999	999999.99999	999999.99999
155	999999.99999	999999.99999	999999.99999	999999.99999
160	999999.99999	999999.99999	999999.99999	999999.99999

U.S. DEPT. AGR., FOREST SERVICE. 1970.

Table 2.--Discounted Single Payment Multiplier

The value of a $1 payment discounted for n years.

$$\frac{1}{(1+i)^n}$$

This multiplier is used to find the present value now (V_o) of a future payment or value in n years (V_n), which may be a cost or an income, discounted annually for n years at the interest rate i.

To find the present value, multiply the future value by the multiplier for the desired rate i and years n:

$$V_o = V_n \left[\frac{1}{(1+i)^n} \right]$$

Example: Find the present value of a future sale of timber for $100 to be made 20 years from now, using a discount rate of 4 percent.

Future value: V_n = $100

Interest rate: i = .04

Years: n = 20

Multiplier: = 0.45639 (page 20)

Present value: V_o = $100 (0.4564) = $45.64

Notes

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	.99502	.99010	.98522	.98039
2	.99007	.98030	.97066	.96117
3	.98515	.97059	.95632	.94232
4	.98025	.96098	.94218	.92385
5	.97537	.95147	.92826	.90573
6	.97052	.94205	.91454	.88797
7	.96569	.93272	.90103	.87056
8	.96089	.92348	.88771	.85349
9	.95610	.91434	.87459	.83676
10	.95135	.90529	.86167	.82035
11	.94661	.89632	.84893	.80426
12	.94191	.88745	.83639	.78849
13	.93722	.87866	.82403	.77303
14	.93256	.86996	.81185	.75788
15	.92792	.86135	.79985	.74301
16	.92330	.85282	.78803	.72845
17	.91871	.84438	.77639	.71416
18	.91414	.83602	.76491	.70016
19	.90959	.82774	.75361	.68643
20	.90506	.81954	.74247	.67297
21	.90056	.81143	.73150	.65978
22	.89608	.80340	.72069	.64684
23	.89162	.79544	.71004	.63416
24	.88719	.78757	.69954	.62172
25	.88277	.77977	.68921	.60953
26	.87838	.77205	.67902	.59758
27	.87401	.76440	.66899	.58586
28	.86966	.75684	.65910	.57437
29	.86533	.74934	.64936	.56311
30	.86103	.74192	.63976	.55207
31	.85675	.73458	.63031	.54125
32	.85248	.72730	.62099	.53063
33	.84824	.72010	.61182	.52023
34	.84402	.71297	.60277	.51003
35	.83982	.70591	.59387	.50003
36	.83564	.69892	.58509	.49022
37	.83149	.69200	.57644	.48061
38	.82735	.68515	.56792	.47119
39	.82323	.67837	.55953	.46195
40	.81914	.67165	.55126	.45289

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

YEARS	RATE OF INTEREST .025	.030	.035	.040
1	.97561	.97087	.96618	.96154
2	.95181	.94260	.93351	.92456
3	.92860	.91514	.90194	.88900
4	.90595	.88849	.87144	.85480
5	.88385	.86261	.84197	.82193
6	.86230	.83748	.81350	.79031
7	.84127	.81309	.78599	.75992
8	.82075	.78941	.75941	.73069
9	.80073	.76642	.73373	.70259
10	.78120	.74409	.70892	.67556
11	.76214	.72242	.68495	.64958
12	.74356	.70138	.66178	.62460
13	.72542	.68095	.63940	.60057
14	.70773	.66112	.61778	.57748
15	.69047	.64186	.59689	.55526
16	.67362	.62317	.57671	.53391
17	.65720	.60502	.55720	.51337
18	.64117	.58739	.53836	.49363
19	.62553	.57029	.52016	.47464
20	.61027	.55368	.50257	.45639
21	.59539	.53755	.48557	.43883
22	.58086	.52189	.46915	.42196
23	.56670	.50669	.45329	.40573
24	.55288	.49193	.43796	.39012
25	.53939	.47761	.42315	.37512
26	.52623	.46369	.40884	.36069
27	.51340	.45019	.39501	.34682
28	.50088	.43708	.38165	.33348
29	.48866	.42435	.36875	.32065
30	.47674	.41199	.35628	.30832
31	.46511	.39999	.34423	.29646
32	.45377	.38834	.33259	.28506
33	.44270	.37703	.32134	.27409
34	.43191	.36604	.31048	.26355
35	.42137	.35538	.29998	.25342
36	.41109	.34503	.28983	.24367
37	.40107	.33498	.28003	.23430
38	.39128	.32523	.27056	.22529
39	.38174	.31575	.26141	.21662
40	.37243	.30656	.25257	.20829

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
1	.95694	.95238	.94787	.94340
2	.91573	.90703	.89845	.89000
3	.87630	.86384	.85161	.83962
4	.83856	.82270	.80722	.79209
5	.80245	.78353	.76513	.74726
6	.76790	.74622	.72525	.70496
7	.73483	.71068	.68744	.66506
8	.70319	.67684	.65160	.62741
9	.67290	.64461	.61763	.59190
10	.64393	.61391	.58543	.55839
11	.61620	.58468	.55491	.52679
12	.58966	.55684	.52598	.49697
13	.56427	.53032	.49856	.46884
14	.53997	.50507	.47257	.44230
15	.51672	.48102	.44793	.41727
16	.49447	.45811	.42458	.39365
17	.47318	.43630	.40245	.37136
18	.45280	.41552	.38147	.35034
19	.43330	.39573	.36158	.33051
20	.41464	.37689	.34273	.31180
21	.39679	.35894	.32486	.29416
22	.37970	.34185	.30793	.27751
23	.36335	.32557	.29187	.26180
24	.34770	.31007	.27666	.24698
25	.33273	.29530	.26223	.23300
26	.31840	.28124	.24856	.21981
27	.30469	.26785	.23560	.20737
28	.29157	.25509	.22332	.19563
29	.27902	.24295	.21168	.18456
30	.26700	.23138	.20064	.17411
31	.25550	.22036	.19018	.16425
32	.24450	.20987	.18027	.15496
33	.23397	.19987	.17087	.14619
34	.22390	.19035	.16196	.13791
35	.21425	.18129	.15352	.13011
36	.20503	.17266	.14552	.12274
37	.19620	.16444	.13793	.11579
38	.18775	.15661	.13074	.10924
39	.17967	.14915	.12392	.10306
40	.17193	.14205	.11746	.09722

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
1	.93458	.92593	.91743	.90909
2	.87344	.85734	.84168	.82645
3	.81630	.79383	.77218	.75131
4	.76290	.73503	.70843	.68301
5	.71299	.68058	.64993	.62092
6	.66634	.63017	.59627	.56447
7	.62275	.58349	.54703	.51316
8	.58201	.54027	.50187	.46651
9	.54393	.50025	.46043	.42410
10	.50835	.46319	.42241	.38554
11	.47509	.42888	.38753	.35049
12	.44401	.39711	.35553	.31863
13	.41496	.36770	.32618	.28966
14	.38782	.34046	.29925	.26333
15	.36245	.31524	.27454	.23939
16	.33873	.29189	.25187	.21763
17	.31657	.27027	.23107	.19784
18	.29586	.25025	.21199	.17986
19	.27651	.23171	.19449	.16351
20	.25842	.21455	.17843	.14864
21	.24151	.19866	.16370	.13513
22	.22571	.18394	.15018	.12285
23	.21095	.17032	.13778	.11168
24	.19715	.15770	.12640	.10153
25	.18425	.14602	.11597	.09230
26	.17220	.13520	.10639	.08391
27	.16093	.12519	.09761	.07628
28	.15040	.11591	.08955	.06934
29	.14056	.10733	.08215	.06304
30	.13137	.09938	.07537	.05731
31	.12277	.09202	.06915	.05210
32	.11474	.08520	.06344	.04736
33	.10723	.07889	.05820	.04306
34	.10022	.07305	.05339	.03914
35	.09366	.06763	.04899	.03558
36	.08754	.06262	.04494	.03235
37	.08181	.05799	.04123	.02941
38	.07646	.05369	.03783	.02673
39	.07146	.04971	.03470	.02430
40	.06678	.04603	.03184	.02209

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	.90090	.89286	.88496	.87719
2	.81162	.79719	.78315	.76947
3	.73119	.71178	.69305	.67497
4	.65873	.63552	.61332	.59208
5	.59345	.56743	.54276	.51937
6	.53464	.50663	.48032	.45559
7	.48166	.45235	.42506	.39964
8	.43393	.40388	.37616	.35056
9	.39092	.36061	.33288	.30751
10	.35218	.32197	.29459	.26974
11	.31728	.28748	.26070	.23662
12	.28584	.25668	.23071	.20756
13	.25751	.22917	.20416	.18207
14	.23199	.20462	.18068	.15971
15	.20900	.18270	.15989	.14010
16	.18829	.16312	.14150	.12289
17	.16963	.14564	.12522	.10780
18	.15282	.13004	.11081	.09456
19	.13768	.11611	.09806	.08295
20	.12403	.10367	.08678	.07276
21	.11174	.09256	.07680	.06383
22	.10067	.08264	.06796	.05599
23	.09069	.07379	.06014	.04911
24	.08170	.06588	.05323	.04308
25	.07361	.05882	.04710	.03779
26	.06631	.05252	.04168	.03315
27	.05974	.04689	.03689	.02908
28	.05382	.04187	.03264	.02551
29	.04849	.03738	.02889	.02237
30	.04368	.03338	.02557	.01963
31	.03935	.02980	.02262	.01722
32	.03545	.02661	.02002	.01510
33	.03194	.02376	.01772	.01325
34	.02878	.02121	.01568	.01162
35	.02592	.01894	.01388	.01019
36	.02335	.01691	.01228	.00894
37	.02104	.01510	.01087	.00784
38	.01896	.01348	.00962	.00688
39	.01708	.01204	.00851	.00604
40	.01538	.01075	.00753	.00529

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	.86957	.83333	.80000	.76923
2	.75614	.69444	.64000	.59172
3	.65752	.57870	.51200	.45517
4	.57175	.48225	.40960	.35013
5	.49718	.40188	.32768	.26933
6	.43233	.33490	.26214	.20718
7	.37594	.27908	.20972	.15937
8	.32690	.23257	.16777	.12259
9	.28426	.19381	.13422	.09430
10	.24718	.16151	.10737	.07254
11	.21494	.13459	.08590	.05580
12	.18691	.11216	.06872	.04292
13	.16253	.09346	.05498	.03302
14	.14133	.07789	.04398	.02540
15	.12289	.06491	.03518	.01954
16	.10686	.05409	.02815	.01503
17	.09293	.04507	.02252	.01156
18	.08081	.03756	.01801	.00889
19	.07027	.03130	.01441	.00684
20	.06110	.02608	.01153	.00526
21	.05313	.02174	.00922	.00405
22	.04620	.01811	.00738	.00311
23	.04017	.01509	.00590	.00239
24	.03493	.01258	.00472	.00184
25	.03038	.01048	.00378	.00142
26	.02642	.00874	.00302	.00109
27	.02297	.00728	.00242	.00084
28	.01997	.00607	.00193	.00065
29	.01737	.00506	.00155	.00050
30	.01510	.00421	.00124	.00038
31	.01313	.00351	.00099	.00029
32	.01142	.00293	.00079	.00023
33	.00993	.00244	.00063	.00017
34	.00864	.00203	.00051	.00013
35	.00751	.00169	.00041	.00010
36	.00653	.00141	.00032	.00008
37	.00568	.00118	.00026	.00006
38	.00494	.00098	.00021	.00005
39	.00429	.00082	.00017	.00004
40	.00373	.00068	.00013	.00003

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

YEARS	RATE OF INTEREST .005	.010	.015	.020
5	.97537	.95147	.92826	.90573
10	.95135	.90529	.86167	.82035
15	.92792	.86135	.79985	.74301
20	.90506	.81954	.74247	.67297
25	.88277	.77977	.68921	.60953
30	.86103	.74192	.63976	.55207
35	.83982	.70591	.59387	.50003
40	.81914	.67165	.55126	.45289
45	.79896	.63905	.51171	.41020
50	.77929	.60804	.47500	.37153
55	.76009	.57853	.44093	.33650
60	.74137	.55045	.40930	.30478
65	.72311	.52373	.37993	.27605
70	.70530	.49831	.35268	.25003
75	.68793	.47413	.32738	.22646
80	.67099	.45112	.30389	.20511
85	.65446	.42922	.28209	.18577
90	.63834	.40839	.26185	.16826
95	.62262	.38857	.24307	.15240
100	.60729	.36971	.22563	.13803
105	.59233	.35177	.20944	.12502
110	.57774	.33469	.19442	.11324
115	.56351	.31845	.18047	.10256
120	.54963	.30299	.16752	.09289
125	.53610	.28829	.15551	.08414
130	.52289	.27430	.14435	.07620
135	.51001	.26098	.13399	.06902
140	.49745	.24832	.12438	.06251
145	.48520	.23627	.11546	.05662
150	.47325	.22480	.10718	.05128
155	.46159	.21389	.09949	.04645
160	.45023	.20351	.09235	.04207

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	.88385	.86261	.84197	.82193
10	.78120	.74409	.70892	.67556
15	.69047	.64186	.59689	.55526
20	.61027	.55368	.50257	.45639
25	.53939	.47761	.42315	.37512
30	.47674	.41199	.35628	.30832
35	.42137	.35538	.29998	.25342
40	.37243	.30656	.25257	.20829
45	.32917	.26444	.21266	.17120
50	.29094	.22811	.17905	.14071
55	.25715	.19677	.15076	.11566
60	.22728	.16973	.12693	.09506
65	.20089	.14641	.10688	.07813
70	.17755	.12630	.08999	.06422
75	.15693	.10895	.07577	.05278
80	.13870	.09398	.06379	.04338
85	.12259	.08107	.05371	.03566
90	.10836	.06993	.04522	.02931
95	.09577	.06032	.03808	.02409
100	.08465	.05203	.03206	.01980
105	.07482	.04488	.02699	.01627
110	.06613	.03872	.02273	.01338
115	.05845	.03340	.01914	.01099
120	.05166	.02881	.01611	.00904
125	.04566	.02485	.01357	.00743
130	.04036	.02144	.01142	.00610
135	.03567	.01849	.00962	.00502
140	.03153	.01595	.00810	.00412
145	.02786	.01376	.00682	.00339
150	.02463	.01187	.00574	.00279
155	.02177	.01024	.00483	.00229
160	.01924	.00883	.00407	.00188

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

YEARS	RATE OF INTEREST .045	.050	.055	.060
5	.80245	.78353	.76513	.74726
10	.64393	.61391	.58543	.55839
15	.51672	.48102	.44793	.41727
20	.41464	.37689	.34273	.31180
25	.33273	.29530	.26223	.23300
30	.26700	.23138	.20064	.17411
35	.21425	.18129	.15352	.13011
40	.17193	.14205	.11746	.09722
45	.13796	.11130	.08988	.07265
50	.11071	.08720	.06877	.05429
55	.08884	.06833	.05262	.04057
60	.07129	.05354	.04026	.03031
65	.05721	.04195	.03080	.02265
70	.04590	.03287	.02357	.01693
75	.03684	.02575	.01803	.01265
80	.02956	.02018	.01380	.00945
85	.02372	.01581	.01056	.00706
90	.01903	.01239	.00808	.00528
95	.01527	.00971	.00618	.00394
100	.01226	.00760	.00473	.00295
105	.00984	.00596	.00362	.00220
110	.00789	.00467	.00277	.00165
115	.00633	.00366	.00212	.00123
120	.00508	.00287	.00162	.00092
125	.00408	.00225	.00124	.00069
130	.00327	.00176	.00095	.00051
135	.00263	.00138	.00073	.00038
140	.00211	.00108	.00056	.00029
145	.00169	.00085	.00043	.00021
150	.00136	.00066	.00033	.00016
155	.00109	.00052	.00025	.00012
160	.00087	.00041	.00019	.00009

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TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR
N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
5	.71299	.68058	.64993	.62092
10	.50835	.46319	.42241	.38554
15	.36245	.31524	.27454	.23939
20	.25842	.21455	.17843	.14864
25	.18425	.14602	.11597	.09230
30	.13137	.09938	.07537	.05731
35	.09366	.06763	.04899	.03558
40	.06678	.04603	.03184	.02209
45	.04761	.03133	.02069	.01372
50	.03395	.02132	.01345	.00852
55	.02420	.01451	.00874	.00529
60	.01726	.00988	.00568	.00328
65	.01230	.00672	.00369	.00204
70	.00877	.00457	.00240	.00127
75	.00625	.00311	.00156	.00079
80	.00446	.00212	.00101	.00049
85	.00318	.00144	.00066	.00030
90	.00227	.00098	.00043	.00019
95	.00162	.00067	.00028	.00012
100	.00115	.00045	.00018	.00007
105	.00082	.00031	.00012	.00005
110	.00059	.00021	.00008	.00003
115	.00042	.00014	.00005	.00002
120	.00030	.00010	.00003	.00001
125	.00021	.00007	.00002	.00001
130	.00015	.00005	.00001	.00000
135	.00011	.00003	.00001	.00000
140	.00008	.00002	.00001	.00000
145	.00005	.00001	.00000	.00000
150	.00004	.00001	.00000	.00000
155	.00003	.00001	.00000	.00000
160	.00002	.00000	.00000	.00000

TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	.59345	.56743	.54276	.51937
10	.35218	.32197	.29459	.26974
15	.20900	.18270	.15989	.14010
20	.12403	.10367	.08678	.07276
25	.07361	.05882	.04710	.03779
30	.04368	.03338	.02557	.01963
35	.02592	.01894	.01388	.01019
40	.01538	.01075	.00753	.00529
45	.00913	.00610	.00409	.00275
50	.00542	.00346	.00222	.00143
55	.00322	.00196	.00120	.00074
60	.00191	.00111	.00065	.00039
65	.00113	.00063	.00035	.00020
70	.00067	.00036	.00019	.00010
75	.00040	.00020	.00010	.00005
80	.00024	.00012	.00006	.00003
85	.00014	.00007	.00003	.00001
90	.00008	.00004	.00002	.00001
95	.00005	.00002	.00001	.00000
100	.00003	.00001	.00000	.00000
105	.00002	.00001	.00000	.00000
110	.00001	.00000	.00000	.00000
115	.00001	.00000	.00000	.00000
120	.00000	.00000	.00000	.00000
125	.00000	.00000	.00000	.00000
130	.00000	.00000	.00000	.00000
135	.00000	.00000	.00000	.00000
140	.00000	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

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TABLE 2. DISCOUNTED SINGLE PAYMENT MULTIPLIER
THE VALUE OF A ONE DOLLAR PAYMENT DISCOUNTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
5	.49718	.40188	.32768	.26933
10	.24718	.16151	.10737	.07254
15	.12289	.06491	.03518	.01954
20	.06110	.02608	.01153	.00526
25	.03038	.01048	.00378	.00142
30	.01510	.00421	.00124	.00038
35	.00751	.00169	.00041	.00010
40	.00373	.00068	.00013	.00003
45	.00186	.00027	.00004	.00001
50	.00092	.00011	.00001	.00000
55	.00046	.00004	.00000	.00000
60	.00023	.00002	.00000	.00000
65	.00011	.00001	.00000	.00000
70	.00006	.00000	.00000	.00000
75	.00003	.00000	.00000	.00000
80	.00001	.00000	.00000	.00000
85	.00001	.00000	.00000	.00000
90	.00000	.00000	.00000	.00000
95	.00000	.00000	.00000	.00000
100	.00000	.00000	.00000	.00000
105	.00000	.00000	.00000	.00000
110	.00000	.00000	.00000	.00000
115	.00000	.00000	.00000	.00000
120	.00000	.00000	.00000	.00000
125	.00000	.00000	.00000	.00000
130	.00000	.00000	.00000	.00000
135	.00000	.00000	.00000	.00000
140	.00000	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

Table 3.--Compounded Periodic Payment Multiplier
(Also called the Land Expectation Value Multiplier)

The present value of a \$1 payment now and every n years thereafter.

$$\frac{(1+i)^n}{(1+i)^n - 1}$$

This multiplier is used to find the value now (V_o) of a periodic payment or value (V), either a cost or an income, made now, n years from now, and every n years thereafter. It is commonly used to determine the value of an unending series of rotations (the land expectation value V_o) when the present net value for one rotation (V) is known.

To find the present value of an unending sequence of payments or values beginning now, multiply the periodic payment or value by the multiplier for the appropriate interest rate i and years n:

$$V_o = V \left[\frac{(1+i)^n}{(1+i)^n - 1} \right]$$

Example: Find the present net value of a timber-growing investment for an unending sequence of rotations (the land expectation value), when the present net value for one 50-year rotation is \$20 per acre, with an interest rate of 6 percent.

Periodic value: V = \$20 per acre

Interest rate: i = .06

Years: n = 50

Multiplier: = 1.05740 (page 41)

Land expectation value: V_o = \$20 (1.0574) = \$21.15 per acre

Notes

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

YEARS	RATE OF INTEREST .005	.010	.015	.020
1	201.00000	101.00000	67.66667	51.00000
2	100.75062	50.75124	34.08519	25.75248
3	67.33444	34.00221	22.89220	17.33773
4	50.62656	25.62811	17.29632	13.13119
5	40.60199	20.60398	13.93929	10.60792
6	33.91909	17.25484	11.70168	8.92629
7	29.14571	14.86283	10.10374	7.72560
8	25.56577	13.06903	8.90560	6.82549
9	22.78147	11.67404	7.97399	6.12577
10	20.55411	10.55821	7.22895	5.56633
11	18.73181	9.64541	6.61959	5.10890
12	17.21329	8.88488	6.11200	4.72798
13	15.92845	8.24148	5.68269	4.40592
14	14.82722	7.69012	5.31489	4.13010
15	13.87287	7.21238	4.99629	3.89127
16	13.03787	6.79446	4.71767	3.68251
17	12.30116	6.42581	4.47198	3.49849
18	11.64635	6.09820	4.25372	3.33511
19	11.06051	5.80518	4.05856	3.18909
20	10.53329	5.54153	3.88305	3.05784
21	10.05633	5.30308	3.72437	2.93924
22	9.62276	5.08637	3.58022	2.83157
23	9.22693	4.88858	3.44872	2.73340
24	8.86412	4.70735	3.32827	2.64355
25	8.53037	4.54068	3.21756	2.56102
26	8.22233	4.38689	3.11546	2.48496
27	7.93713	4.24455	3.02102	2.41465
28	7.67233	4.11244	2.93341	2.34948
29	7.42583	3.98950	2.85192	2.28892
30	7.19578	3.87481	2.77595	2.23250
31	6.98061	3.76757	2.70495	2.17982
32	6.77891	3.66709	2.63847	2.13053
33	6.58945	3.57274	2.57610	2.08433
34	6.41117	3.48400	2.51746	2.04093
35	6.24310	3.40037	2.46224	2.00011
36	6.08439	3.32143	2.41016	1.96164
37	5.93428	3.24680	2.36096	1.92534
38	5.79209	3.17615	2.31441	1.89103
39	5.65721	3.10916	2.27031	1.85856
40	5.52910	3.04556	2.22847	1.82779

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TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

YEARS	RATE OF INTEREST .025	.030	.035	.040
1	41.00000	34.33333	29.57143	26.00000
2	20.75309	17.42036	15.04001	13.25490
3	14.00549	11.78435	10.19812	9.00871
4	10.63272	8.96757	7.77860	6.88725
5	8.60987	7.27849	6.32804	5.61568
6	7.26200	6.15325	5.36195	4.76905
7	6.29982	5.35021	4.67270	4.16524
8	5.57869	4.74855	4.15648	3.71320
9	5.01828	4.28113	3.75560	3.36232
10	4.57035	3.90768	3.43547	3.08227
11	4.20424	3.60258	3.17406	2.85373
12	3.89949	3.34874	2.95668	2.66380
13	3.64193	3.13432	2.77319	2.50359
14	3.42146	2.95088	2.61631	2.36672
15	3.23066	2.79222	2.48072	2.24853
16	3.06396	2.65369	2.36242	2.14550
17	2.91711	2.53175	2.25838	2.05496
18	2.78680	2.42362	2.16620	1.97483
19	2.67042	2.32713	2.08401	1.90347
20	2.56589	2.24052	2.01032	1.83954
21	2.47149	2.16239	1.94390	1.78200
22	2.38586	2.09158	1.88377	1.72997
23	2.30786	2.02713	1.82911	1.68273
24	2.23651	1.96825	1.77922	1.63967
25	2.17104	1.91426	1.73354	1.60030
26	2.11075	1.86461	1.69158	1.56418
27	2.05507	1.81881	1.65293	1.53096
28	2.00352	1.77644	1.61722	1.50032
29	1.95565	1.73716	1.58415	1.47200
30	1.91111	1.70064	1.55347	1.44575
31	1.86956	1.66663	1.52493	1.42138
32	1.83073	1.63489	1.49833	1.39871
33	1.79438	1.60520	1.47350	1.37759
34	1.76027	1.57740	1.45028	1.35787
35	1.72822	1.55131	1.42852	1.33943
36	1.69806	1.52679	1.40812	1.32217
37	1.66964	1.50372	1.38895	1.30599
38	1.64280	1.48198	1.37092	1.29080
39	1.61745	1.46146	1.35394	1.27652
40	1.59345	1.44208	1.33792	1.26309

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

YEARS	RATE OF INTEREST .045	.050	.055	.060
1	23.22222	21.00000	19.18182	17.66667
2	11.86661	10.75610	9.84760	9.09061
3	8.08385	7.34417	6.73916	6.23516
4	6.19430	5.64024	5.18717	4.80986
5	5.06204	4.61950	4.25775	3.95661
6	4.30841	3.94035	3.63962	3.38938
7	3.77114	3.45640	3.19935	2.98558
8	3.36910	3.09444	2.87025	2.68393
9	3.05721	2.81380	2.61526	2.45037
10	2.80842	2.59009	2.41214	2.26447
11	2.60552	2.40778	2.24674	2.11322
12	2.43703	2.25651	2.10962	1.98795
13	2.29501	2.12912	1.99426	1.88267
14	2.17378	2.02048	1.89598	1.79308
15	2.06920	1.92685	1.81137	1.71605
16	1.97812	1.84540	1.73786	1.64920
17	1.89817	1.77398	1.67349	1.59075
18	1.82749	1.71092	1.61673	1.53928
19	1.76461	1.65490	1.56636	1.49368
20	1.70836	1.60485	1.52144	1.45308
21	1.65779	1.55992	1.48118	1.41674
22	1.61213	1.51941	1.44493	1.38409
23	1.57072	1.48274	1.41218	1.35464
24	1.53305	1.44942	1.38247	1.32798
25	1.49865	1.41905	1.35544	1.30378
26	1.46714	1.39129	1.33078	1.28174
27	1.43821	1.36584	1.30822	1.26162
28	1.41157	1.34245	1.28753	1.24321
29	1.38699	1.32091	1.26852	1.22633
30	1.36426	1.30103	1.25101	1.21082
31	1.34319	1.28264	1.23485	1.19654
32	1.32363	1.26561	1.21991	1.18337
33	1.30543	1.24980	1.20609	1.17122
34	1.28849	1.23511	1.19327	1.15997
35	1.27268	1.22143	1.18136	1.14956
36	1.25791	1.20869	1.17030	1.13991
37	1.24409	1.19680	1.16000	1.13096
38	1.23115	1.18568	1.15040	1.12264
39	1.21901	1.17529	1.14145	1.11490
40	1.20763	1.16556	1.13310	1.10769

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
1	15.28571	13.50000	12.11111	11.00000
2	7.90131	7.00962	6.31632	5.76190
3	5.44360	4.85042	4.38950	4.02115
4	4.21754	3.77401	3.42965	3.15471
5	3.48415	3.13071	2.85658	2.63797
6	2.99708	2.70394	2.47689	2.29607
7	2.65076	2.40091	2.20767	2.05405
8	2.39240	2.17518	2.00749	1.87444
9	2.19266	2.00100	1.85332	1.73641
10	2.03396	1.86287	1.73133	1.62745
11	1.90510	1.75095	1.63274	1.53963
12	1.79860	1.65869	1.55167	1.46763
13	1.70930	1.58152	1.48407	1.40779
14	1.63350	1.51621	1.42704	1.35746
15	1.56849	1.46037	1.37843	1.31474
16	1.51225	1.41221	1.33667	1.27817
17	1.46322	1.37037	1.30051	1.24664
18	1.42018	1.33378	1.26903	1.21930
19	1.38219	1.30160	1.24145	1.19547
20	1.34847	1.27315	1.21718	1.17460
21	1.31841	1.24790	1.19574	1.15624
22	1.29151	1.22540	1.17672	1.14005
23	1.26734	1.20528	1.15980	1.12572
24	1.24556	1.18722	1.14470	1.11300
25	1.22586	1.17098	1.13118	1.10168
26	1.20801	1.15634	1.11906	1.09159
27	1.19180	1.14310	1.10817	1.08258
28	1.17703	1.13111	1.09836	1.07451
29	1.16355	1.12023	1.08951	1.06728
30	1.15123	1.11034	1.08152	1.06079
31	1.13996	1.10134	1.07428	1.05496
32	1.12961	1.09314	1.06774	1.04972
33	1.12012	1.08565	1.06180	1.04499
34	1.11138	1.07880	1.05641	1.04074
35	1.10334	1.07254	1.05151	1.03690
36	1.09593	1.06681	1.04706	1.03343
37	1.08910	1.06156	1.04300	1.03030
38	1.08279	1.05674	1.03931	1.02747
39	1.07695	1.05231	1.03595	1.02491
40	1.07156	1.04825	1.03288	1.02259

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT NOW AND EVERY N YEARS THEREAFTER.

YEARS	RATE OF INTEREST .110	.120	.130	.140
1	10.09091	9.33333	8.69231	8.14286
2	5.30849	4.93082	4.61141	4.33778
3	3.72012	3.46957	3.25786	3.07665
4	2.93024	2.74362	2.58611	2.45146
5	2.45973	2.31175	2.18703	2.08060
6	2.14888	2.02688	1.92426	1.83684
7	1.92923	1.82598	1.73931	1.66566
8	1.76656	1.67752	1.60297	1.53979
9	1.64183	1.56399	1.49899	1.44406
10	1.54365	1.47487	1.41761	1.36938
11	1.46474	1.40346	1.35263	1.30996
12	1.40025	1.34531	1.29989	1.26192
13	1.34683	1.29731	1.25654	1.22260
14	1.30207	1.25726	1.22052	1.19007
15	1.26423	1.22354	1.19032	1.16292
16	1.23197	1.19492	1.16482	1.14011
17	1.20429	1.17047	1.14314	1.12082
18	1.18039	1.14948	1.12462	1.10444
19	1.15966	1.13136	1.10873	1.09045
20	1.14160	1.11566	1.09503	1.07847
21	1.12580	1.10200	1.08319	1.06818
22	1.11194	1.09009	1.07292	1.05931
23	1.09974	1.07967	1.06399	1.05165
24	1.08897	1.07053	1.05622	1.04502
25	1.07946	1.06250	1.04943	1.03927
26	1.07102	1.05543	1.04350	1.03429
27	1.06354	1.04920	1.03830	1.02995
28	1.05688	1.04370	1.03375	1.02617
29	1.05096	1.03884	1.02975	1.02289
30	1.04568	1.03453	1.02624	1.02002
31	1.04097	1.03072	1.02315	1.01752
32	1.03676	1.02734	1.02043	1.01533
33	1.03299	1.02434	1.01804	1.01343
34	1.02963	1.02167	1.01593	1.01176
35	1.02661	1.01931	1.01407	1.01030
36	1.02391	1.01720	1.01243	1.00902
37	1.02149	1.01533	1.01099	1.00791
38	1.01932	1.01366	1.00971	1.00693
39	1.01737	1.01218	1.00858	1.00607
40	1.01562	1.01086	1.00759	1.00532

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	7.66667	6.00000	5.00000	4.33333
2	4.10078	3.27273	2.77778	2.44928
3	2.91985	2.37363	2.04918	1.83542
4	2.33510	1.93145	1.69377	1.53876
5	1.98877	1.67190	1.48739	1.36861
6	1.76158	1.50353	1.35528	1.26131
7	1.60240	1.38712	1.26537	1.18958
8	1.48567	1.30305	1.20159	1.13972
9	1.39716	1.24040	1.15502	1.10412
10	1.32835	1.19261	1.12029	1.07821
11	1.27379	1.15552	1.09397	1.05910
12	1.22987	1.12632	1.07379	1.04485
13	1.19407	1.10310	1.05817	1.03414
14	1.16459	1.08447	1.04600	1.02606
15	1.14011	1.06941	1.03647	1.01993
16	1.11965	1.05718	1.02896	1.01526
17	1.10245	1.04720	1.02304	1.01170
18	1.08791	1.03903	1.01834	1.00897
19	1.07558	1.03231	1.01462	1.00689
20	1.06508	1.02678	1.01166	1.00529
21	1.05611	1.02222	1.00931	1.00406
22	1.04844	1.01845	1.00743	1.00312
23	1.04186	1.01533	1.00594	1.00240
24	1.03620	1.01274	1.00474	1.00185
25	1.03133	1.01059	1.00379	1.00142
26	1.02713	1.00881	1.00303	1.00109
27	1.02351	1.00733	1.00242	1.00084
28	1.02038	1.00610	1.00194	1.00065
29	1.01768	1.00508	1.00155	1.00050
30	1.01533	1.00423	1.00124	1.00038
31	1.01331	1.00352	1.00099	1.00029
32	1.01155	1.00293	1.00079	1.00023
33	1.01003	1.00244	1.00063	1.00017
34	1.00871	1.00204	1.00051	1.00013
35	1.00757	1.00170	1.00041	1.00010
36	1.00657	1.00141	1.00032	1.00008
37	1.00571	1.00118	1.00026	1.00006
38	1.00496	1.00098	1.00021	1.00005
39	1.00431	1.00082	1.00017	1.00004
40	1.00375	1.00068	1.00013	1.00003

U.S. DEPT. AGR., FORSET SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
5	40.60199	20.60398	13.93929	10.60792
10	20.55411	10.55821	7.22895	5.56633
15	13.87287	7.21238	4.99629	3.89127
20	10.53329	5.54153	3.88305	3.05784
25	8.53037	4.54068	3.21756	2.56102
30	7.19578	3.87481	2.77595	2.23250
35	6.24310	3.40037	2.46224	2.00011
40	5.52910	3.04556	2.22847	1.82779
45	4.97423	2.77050	2.04798	1.69548
50	4.53075	2.55127	1.90478	1.59116
55	4.16828	2.37264	1.78868	1.50717
60	3.86656	2.22444	1.69290	1.43840
65	3.61158	2.09967	1.61273	1.38131
70	3.39331	1.99328	1.54482	1.33338
75	3.20443	1.90161	1.48671	1.29275
80	3.03941	1.82189	1.43655	1.25804
85	2.89404	1.75200	1.39293	1.22816
90	2.76505	1.69031	1.35474	1.20230
95	2.64986	1.63551	1.32112	1.17980
100	2.54639	1.58657	1.29137	1.16014
105	2.45296	1.54266	1.26493	1.14288
110	2.36821	1.50307	1.24134	1.12769
115	2.29101	1.46724	1.22021	1.11428
120	2.22041	1.43471	1.20123	1.10240
125	2.15562	1.40506	1.18414	1.09186
130	2.09596	1.37797	1.16870	1.08249
135	2.04087	1.35315	1.15473	1.07414
140	1.98986	1.33035	1.14205	1.06668
145	1.94250	1.30936	1.13053	1.06002
150	1.89843	1.28999	1.12004	1.05406
155	1.85734	1.27208	1.11048	1.04871
160	1.81893	1.25550	1.10175	1.04392

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	8.60987	7.27849	6.32804	5.61568
10	4.57035	3.90768	3.43547	3.08227
15	3.23066	2.79222	2.48072	2.24853
20	2.56589	2.24052	2.01032	1.83954
25	2.17104	1.91426	1.73354	1.60030
30	1.91111	1.70064	1.55347	1.44575
35	1.72822	1.55131	1.42852	1.33943
40	1.59345	1.44208	1.33792	1.26309
45	1.49070	1.35951	1.27010	1.20656
50	1.41032	1.29552	1.21811	1.16376
55	1.34617	1.24497	1.17752	1.13078
60	1.29414	1.20443	1.14539	1.10505
65	1.25139	1.17153	1.11966	1.08475
70	1.21588	1.14455	1.09888	1.06863
75	1.18614	1.12227	1.08198	1.05573
80	1.16104	1.10372	1.06814	1.04535
85	1.13972	1.08822	1.05676	1.03698
90	1.12152	1.07519	1.04737	1.03019
95	1.10591	1.06419	1.03958	1.02468
100	1.09248	1.05489	1.03312	1.02020
105	1.08087	1.04699	1.02774	1.01654
110	1.07081	1.04028	1.02326	1.01356
115	1.06207	1.03455	1.01951	1.01112
120	1.05447	1.02966	1.01638	1.00912
125	1.04784	1.02548	1.01375	1.00748
130	1.04205	1.02191	1.01155	1.00614
135	1.03699	1.01884	1.00971	1.00504
140	1.03255	1.01621	1.00816	1.00414
145	1.02866	1.01395	1.00686	1.00340
150	1.02525	1.01201	1.00577	1.00279
155	1.02225	1.01034	1.00486	1.00230
160	1.01962	1.00891	1.00409	1.00189

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
5	5.06204	4.61950	4.25775	3.95661
10	2.80842	2.59009	2.41214	2.26447
15	2.06920	1.92685	1.81137	1.71605
20	1.70836	1.60485	1.52144	1.45308
25	1.49865	1.41905	1.35544	1.30378
30	1.36426	1.30103	1.25101	1.21082
35	1.27268	1.22143	1.18136	1.14956
40	1.20763	1.16556	1.13310	1.10769
45	1.16004	1.12523	1.09875	1.07834
50	1.12449	1.09553	1.07384	1.05740
55	1.09750	1.07334	1.05554	1.04228
60	1.07676	1.05656	1.04195	1.03126
65	1.06068	1.04378	1.03178	1.02318
70	1.04811	1.03398	1.02414	1.01722
75	1.03825	1.02643	1.01836	1.01281
80	1.03046	1.02059	1.01399	1.00954
85	1.02430	1.01606	1.01067	1.00711
90	1.01940	1.01254	1.00814	1.00531
95	1.01551	1.00980	1.00622	1.00396
100	1.01241	1.00766	1.00475	1.00296
105	1.00993	1.00599	1.00363	1.00221
110	1.00796	1.00469	1.00278	1.00165
115	1.00637	1.00367	1.00212	1.00123
120	1.00511	1.00287	1.00162	1.00092
125	1.00409	1.00225	1.00124	1.00069
130	1.00328	1.00176	1.00095	1.00051
135	1.00263	1.00138	1.00073	1.00038
140	1.00211	1.00108	1.00056	1.00029
145	1.00169	1.00085	1.00043	1.00021
150	1.00136	1.00066	1.00033	1.00016
155	1.00109	1.00052	1.00025	1.00012
160	1.00087	1.00041	1.00019	1.00009

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER. THE PRESENT VALUE OF A ONE DOLLAR PAYMENT NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	3.48415	3.13071	2.85658	2.63797
10	2.03396	1.86287	1.73133	1.62745
15	1.56849	1.46037	1.37843	1.31474
20	1.34847	1.27315	1.21718	1.17460
25	1.22586	1.17098	1.13118	1.10168
30	1.15123	1.11034	1.08152	1.06079
35	1.10334	1.07254	1.05151	1.03690
40	1.07156	1.04825	1.03288	1.02259
45	1.04999	1.03234	1.02113	1.01391
50	1.03514	1.02179	1.01363	1.00859
55	1.02480	1.01472	1.00882	1.00532
60	1.01756	1.00997	1.00571	1.00330
65	1.01246	1.00677	1.00371	1.00204
70	1.00885	1.00460	1.00241	1.00127
75	1.00629	1.00312	1.00156	1.00079
80	1.00448	1.00212	1.00101	1.00049
85	1.00319	1.00144	1.00066	1.00030
90	1.00227	1.00098	1.00043	1.00019
95	1.00162	1.00067	1.00028	1.00012
100	1.00115	1.00045	1.00018	1.00007
105	1.00082	1.00031	1.00012	1.00005
110	1.00059	1.00021	1.00008	1.00003
115	1.00042	1.00014	1.00005	1.00002
120	1.00030	1.00010	1.00003	1.00001
125	1.00021	1.00007	1.00002	1.00001
130	1.00015	1.00005	1.00001	1.00000
135	1.00011	1.00003	1.00001	1.00000
140	1.00008	1.00002	1.00001	1.00000
145	1.00005	1.00001	1.00000	1.00000
150	1.00004	1.00001	1.00000	1.00000
155	1.00003	1.00001	1.00000	1.00000
160	1.00002	1.00000	1.00000	1.00000

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT
NOW AND EVERY N YEARS THEREAFTER.

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	2.45973	2.31175	2.18703	2.08060
10	1.54365	1.47487	1.41761	1.36938
15	1.26423	1.22354	1.19032	1.16292
20	1.14160	1.11566	1.09503	1.07847
25	1.07946	1.06250	1.04943	1.03927
30	1.04568	1.03453	1.02624	1.02002
35	1.02661	1.01931	1.01407	1.01030
40	1.01562	1.01086	1.00759	1.00532
45	1.00921	1.00614	1.00410	1.00276
50	1.00545	1.00347	1.00222	1.00143
55	1.00323	1.00197	1.00121	1.00074
60	1.00191	1.00112	1.00065	1.00039
65	1.00113	1.00063	1.00035	1.00020
70	1.00067	1.00036	1.00019	1.00010
75	1.00040	1.00020	1.00010	1.00005
80	1.00024	1.00012	1.00006	1.00003
85	1.00014	1.00007	1.00003	1.00001
90	1.00008	1.00004	1.00002	1.00001
95	1.00005	1.00002	1.00001	1.00000
100	1.00003	1.00001	1.00000	1.00000
105	1.00002	1.00001	1.00000	1.00000
110	1.00001	1.00000	1.00000	1.00000
115	1.00001	1.00000	1.00000	1.00000
120	1.00000	1.00000	1.00000	1.00000
125	1.00000	1.00000	1.00000	1.00000
130	1.00000	1.00000	1.00000	1.00000
135	1.00000	1.00000	1.00000	1.00000
140	1.00000	1.00000	1.00000	1.00000
145	1.00000	1.00000	1.00000	1.00000
150	1.00000	1.00000	1.00000	1.00000
155	1.00000	1.00000	1.00000	1.00000
160	1.00000	1.00000	1.00000	1.00000

TABLE 3. COMPOUNDED PERIODIC PAYMENT MULTIPLIER.
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT NOW AND EVERY N YEARS THEREAFTER.

YEARS	RATE OF INTEREST .150	.200	.250	.300
5	1.98877	1.67190	1.48739	1.36861
10	1.32835	1.19261	1.12029	1.07821
15	1.14011	1.06941	1.03647	1.01993
20	1.06508	1.02678	1.01166	1.00529
25	1.03133	1.01059	1.00379	1.00142
30	1.01533	1.00423	1.00124	1.00038
35	1.00757	1.00170	1.00041	1.00010
40	1.00375	1.00068	1.00013	1.00003
45	1.00186	1.00027	1.00004	1.00001
50	1.00092	1.00011	1.00001	1.00000
55	1.00046	1.00004	1.00000	1.00000
60	1.00023	1.00002	1.00000	1.00000
65	1.00011	1.00001	1.00000	1.00000
70	1.00006	1.00000	1.00000	1.00000
75	1.00003	1.00000	1.00000	1.00000
80	1.00001	1.00000	1.00000	1.00000
85	1.00001	1.00000	1.00000	1.00000
90	1.00000	1.00000	1.00000	1.00000
95	1.00000	1.00000	1.00000	1.00000
100	1.00000	1.00000	1.00000	1.00000
105	1.00000	1.00000	1.00000	1.00000
110	1.00000	1.00000	1.00000	1.00000
115	1.00000	1.00000	1.00000	1.00000
120	1.00000	1.00000	1.00000	1.00000
125	1.00000	1.00000	1.00000	1.00000
130	1.00000	1.00000	1.00000	1.00000
135	1.00000	1.00000	1.00000	1.00000
140	1.00000	1.00000	1.00000	1.00000
145	1.00000	1.00000	1.00000	1.00000
150	1.00000	1.00000	1.00000	1.00000
155	1.00000	1.00000	1.00000	1.00000
160	1.00000	1.00000	1.00000	1.00000

Table 4.--Discounted Periodic Payment Multiplier

The present value of a \$1 payment n years from now and every n years thereafter.

$$\frac{1}{(1+i)^n - 1}$$

This multiplier is used to find the value now (V_o) of a periodic payment or value (V_n) n years from now and every n years thereafter.

To find the present value of an unending sequence of payments or values beginning n years from now, multiply the periodic payment or value by the multiplier for the appropriate interest rate i and years n:

$$V_o = V_n \left[\frac{1}{(1+i)^n - 1} \right]$$

Example: Find the present value of future incomes from an unending series of timber sales of \$100 per acre at the end of 50-year rotations, the first income to be obtained 50 years from now, with a 5-percent interest rate.

Future income: V_n = \$100 per acre

Interest rate: i = .05

Years: n = 50

Multiplier: = 0.09553 (page 55)

Present value: V_o = \$100 (0.09553) = \$9.55 per acre

Notes

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS
FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	200.00000	100.00000	66.66667	50.00000
2	99.75062	49.75124	33.08519	24.75248
3	66.33444	33.00221	21.89220	16.33773
4	49.62656	24.62811	16.29632	12.13119
5	39.60199	19.60398	12.93929	9.60792
6	32.91909	16.25484	10.70168	7.92629
7	28.14571	13.86283	9.10374	6.72560
8	24.56577	12.06903	7.90560	5.82549
9	21.78147	10.67404	6.97399	5.12577
10	19.55411	9.55821	6.22895	4.56633
11	17.73181	8.64541	5.61959	4.10890
12	16.21329	7.88488	5.11200	3.72798
13	14.92845	7.24148	4.68269	3.40592
14	13.82722	6.69012	4.31489	3.13010
15	12.87287	6.21238	3.99629	2.89127
16	12.03787	5.79446	3.71767	2.68251
17	11.30116	5.42581	3.47198	2.49849
18	10.64635	5.09820	3.25372	2.33511
19	10.06051	4.80518	3.05856	2.18909
20	9.53329	4.54153	2.88305	2.05784
21	9.05633	4.30308	2.72437	1.93924
22	8.62276	4.08637	2.58022	1.83157
23	8.22693	3.88858	2.44872	1.73340
24	7.86412	3.70735	2.32827	1.64355
25	7.53037	3.54068	2.21756	1.56102
26	7.22233	3.38689	2.11546	1.48496
27	6.93713	3.24455	2.02102	1.41465
28	6.67233	3.11244	1.93341	1.34948
29	6.42583	2.98950	1.85192	1.28892
30	6.19578	2.87481	1.77595	1.23250
31	5.98061	2.76757	1.70495	1.17982
32	5.77891	2.66709	1.63847	1.13053
33	5.58945	2.57274	1.57610	1.08433
34	5.41117	2.48400	1.51746	1.04093
35	5.24310	2.40037	1.46224	1.00011
36	5.08439	2.32143	1.41016	.96164
37	4.93428	2.24680	1.36096	.92534
38	4.79209	2.17615	1.31441	.89103
39	4.65721	2.10916	1.27031	.85856
40	4.52910	2.04556	1.22847	.82779

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TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

YEARS	RATE OF INTEREST .025	.030	.035	.040
1	40.00000	33.33333	28.57143	25.00000
2	19.75309	16.42036	14.04001	12.25490
3	13.00549	10.78435	9.19812	8.00871
4	9.63272	7.96757	6.77860	5.88725
5	7.60987	6.27849	5.32804	4.61568
6	6.26200	5.15325	4.36195	3.76905
7	5.29982	4.35021	3.67270	3.16524
8	4.57869	3.74855	3.15648	2.71320
9	4.01828	3.28113	2.75560	2.36232
10	3.57035	2.90768	2.43547	2.08227
11	3.20424	2.60258	2.17406	1.85373
12	2.89949	2.34874	1.95668	1.66380
13	2.64193	2.13432	1.77319	1.50359
14	2.42146	1.95088	1.61631	1.36672
15	2.23066	1.79222	1.48072	1.24853
16	2.06396	1.65369	1.36242	1.14550
17	1.91711	1.53175	1.25838	1.05496
18	1.78680	1.42362	1.16620	.97483
19	1.67042	1.32713	1.08401	.90347
20	1.56589	1.24052	1.01032	.83954
21	1.47149	1.16239	.94390	.78200
22	1.38586	1.09158	.88377	.72997
23	1.30786	1.02713	.82911	.68273
24	1.23651	.96825	.77922	.63967
25	1.17104	.91426	.73354	.60030
26	1.11075	.86461	.69158	.56418
27	1.05507	.81881	.65293	.53096
28	1.00352	.77644	.61722	.50032
29	.95565	.73716	.58415	.47200
30	.91111	.70064	.55347	.44575
31	.86956	.66663	.52493	.42138
32	.83073	.63489	.49833	.39871
33	.79438	.60520	.47350	.37759
34	.76027	.57740	.45028	.35787
35	.72822	.55131	.42852	.33943
36	.69806	.52679	.40812	.32217
37	.66964	.50372	.38895	.30599
38	.64280	.48198	.37092	.29080
39	.61745	.46146	.35394	.27652
40	.59345	.44208	.33792	.26309

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TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
1	22.22222	20.00000	18.18182	16.66667
2	10.86661	9.75610	8.84760	8.09061
3	7.08385	6.34417	5.73916	5.23516
4	5.19430	4.64024	4.18717	3.80986
5	4.06204	3.61950	3.25775	2.95661
6	3.30841	2.94035	2.63962	2.38938
7	2.77114	2.45640	2.19935	1.98558
8	2.36910	2.09444	1.87025	1.68393
9	2.05721	1.81380	1.61526	1.45037
10	1.80842	1.59009	1.41214	1.26447
11	1.60552	1.40778	1.24674	1.11322
12	1.43703	1.25651	1.10962	.98795
13	1.29501	1.12912	.99426	.88267
14	1.17378	1.02048	.89598	.79308
15	1.06920	.92685	.81137	.71605
16	.97812	.84540	.73786	.64920
17	.89817	.77398	.67349	.59075
18	.82749	.71092	.61673	.53928
19	.76461	.65490	.56636	.49368
20	.70836	.60485	.52144	.45308
21	.65779	.55992	.48118	.41674
22	.61213	.51941	.44493	.38409
23	.57072	.48274	.41218	.35464
24	.53305	.44942	.38247	.32798
25	.49865	.41905	.35544	.30378
26	.46714	.39129	.33078	.28174
27	.43821	.36584	.30822	.26162
28	.41157	.34245	.28753	.24321
29	.38699	.32091	.26852	.22633
30	.36426	.30103	.25101	.21082
31	.34319	.28264	.23485	.19654
32	.32363	.26561	.21991	.18337
33	.30543	.24980	.20609	.17122
34	.28849	.23511	.19327	.15997
35	.27268	.22143	.18136	.14956
36	.25791	.20869	.17030	.13991
37	.24409	.19680	.16000	.13096
38	.23115	.18568	.15040	.12264
39	.21901	.17529	.14145	.11490
40	.20763	.16556	.13310	.10769

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TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

YEARS	RATE OF INTEREST .070	.080	.090	.100
1	14.28571	12.50000	11.11111	10.00000
2	6.90131	6.00962	5.31632	4.76190
3	4.44360	3.85042	3.38950	3.02115
4	3.21754	2.77401	2.42965	2.15471
5	2.48415	2.13071	1.85658	1.63797
6	1.99708	1.70394	1.47689	1.29607
7	1.65076	1.40091	1.20767	1.05405
8	1.39240	1.17518	1.00749	.87444
9	1.19266	1.00100	.85332	.73641
10	1.03396	.86287	.73133	.62745
11	.90510	.75095	.63274	.53963
12	.79860	.65869	.55167	.46763
13	.70930	.58152	.48407	.40779
14	.63350	.51621	.42704	.35746
15	.56849	.46037	.37843	.31474
16	.51225	.41221	.33667	.27817
17	.46322	.37037	.30051	.24664
18	.42018	.33378	.26903	.21930
19	.38219	.30160	.24145	.19547
20	.34847	.27315	.21718	.17460
21	.31841	.24790	.19574	.15624
22	.29151	.22540	.17672	.14005
23	.26734	.20528	.15980	.12572
24	.24556	.18722	.14470	.11300
25	.22586	.17098	.13118	.10168
26	.20801	.15634	.11906	.09159
27	.19180	.14310	.10817	.08258
28	.17703	.13111	.09836	.07451
29	.16355	.12023	.08951	.06728
30	.15123	.11034	.08152	.06079
31	.13996	.10134	.07428	.05496
32	.12961	.09314	.06774	.04972
33	.12012	.08565	.06180	.04499
34	.11138	.07880	.05641	.04074
35	.10334	.07254	.05151	.03690
36	.09593	.06681	.04706	.03343
37	.08910	.06156	.04300	.03030
38	.08279	.05674	.03931	.02747
39	.07695	.05231	.03595	.02491
40	.07156	.04825	.03288	.02259

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS
FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	9.09091	8.33333	7.69231	7.14286
2	4.30849	3.93082	3.61141	3.33778
3	2.72012	2.46957	2.25786	2.07665
4	1.93024	1.74362	1.58611	1.45146
5	1.45973	1.31175	1.18703	1.08060
6	1.14888	1.02688	.92426	.83684
7	.92923	.82598	.73931	.66566
8	.76656	.67752	.60297	.53979
9	.64183	.56399	.49899	.44406
10	.54365	.47487	.41761	.36938
11	.46474	.40346	.35263	.30996
12	.40025	.34531	.29989	.26192
13	.34683	.29731	.25654	.22260
14	.30207	.25726	.22052	.19007
15	.26423	.22354	.19032	.16292
16	.23197	.19492	.16482	.14011
17	.20429	.17047	.14314	.12082
18	.18039	.14948	.12462	.10444
19	.15966	.13136	.10873	.09045
20	.14160	.11566	.09503	.07847
21	.12580	.10200	.08319	.06818
22	.11194	.09009	.07292	.05931
23	.09974	.07967	.06399	.05165
24	.08897	.07053	.05622	.04502
25	.07946	.06250	.04943	.03927
26	.07102	.05543	.04350	.03429
27	.06354	.04920	.03830	.02995
28	.05688	.04370	.03375	.02617
29	.05096	.03884	.02975	.02289
30	.04568	.03453	.02624	.02002
31	.04097	.03072	.02315	.01752
32	.03676	.02734	.02043	.01533
33	.03299	.02434	.01804	.01343
34	.02963	.02167	.01593	.01176
35	.02661	.01931	.01407	.01030
36	.02391	.01720	.01243	.00902
37	.02149	.01533	.01099	.00791
38	.01932	.01366	.00971	.00693
39	.01737	.01218	.00858	.00607
40	.01562	.01086	.00759	.00532

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	6.66667	5.00000	4.00000	3.33333
2	3.10078	2.27273	1.77778	1.44928
3	1.91985	1.37363	1.04918	.83542
4	1.33510	.93145	.69377	.53876
5	.98877	.67190	.48739	.36861
6	.76158	.50353	.35528	.26131
7	.60240	.38712	.26537	.18958
8	.48567	.30305	.20159	.13972
9	.39716	.24040	.15502	.10412
10	.32835	.19261	.12029	.07821
11	.27379	.15552	.09397	.05910
12	.22987	.12632	.07379	.04485
13	.19407	.10310	.05817	.03414
14	.16459	.08447	.04600	.02606
15	.14011	.06941	.03647	.01993
16	.11965	.05718	.02896	.01526
17	.10245	.04720	.02304	.01170
18	.08791	.03903	.01834	.00897
19	.07558	.03231	.01462	.00689
20	.06508	.02678	.01166	.00529
21	.05611	.02222	.00931	.00406
22	.04844	.01845	.00743	.00312
23	.04186	.01533	.00594	.00240
24	.03620	.01274	.00474	.00185
25	.03133	.01059	.00379	.00142
26	.02713	.00881	.00303	.00109
27	.02351	.00733	.00242	.00084
28	.02038	.00610	.00194	.00065
29	.01768	.00508	.00155	.00050
30	.01533	.00423	.00124	.00038
31	.01331	.00352	.00099	.00029
32	.01155	.00293	.00079	.00023
33	.01003	.00244	.00063	.00017
34	.00871	.00204	.00051	.00013
35	.00757	.00170	.00041	.00010
36	.00657	.00141	.00032	.00008
37	.00571	.00118	.00026	.00006
38	.00496	.00098	.00021	.00005
39	.00431	.00082	.00017	.00004
40	.00375	.00068	.00013	.00003

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TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

YEARS	RATE OF INTEREST .005	.010	.015	.020
5	39.60199	19.60398	12.93929	9.60792
10	19.55411	9.55821	6.22895	4.56633
15	12.87287	6.21238	3.99629	2.89127
20	9.53329	4.54153	2.88305	2.05784
25	7.53037	3.54068	2.21756	1.56102
30	6.19578	2.87481	1.77595	1.23250
35	5.24310	2.40037	1.46224	1.00011
40	4.52910	2.04556	1.22847	.82779
45	3.97423	1.77050	1.04798	.69548
50	3.53075	1.55127	.90478	.59116
55	3.16828	1.37264	.78868	.50717
60	2.86656	1.22444	.69290	.43840
65	2.61158	1.09967	.61273	.38131
70	2.39331	.99328	.54482	.33338
75	2.20443	.90161	.48671	.29275
80	2.03941	.82189	.43655	.25804
85	1.89404	.75200	.39293	.22816
90	1.76505	.69031	.35474	.20230
95	1.64986	.63551	.32112	.17980
100	1.54639	.58657	.29137	.16014
105	1.45296	.54266	.26493	.14288
110	1.36821	.50307	.24134	.12769
115	1.29101	.46724	.22021	.11428
120	1.22041	.43471	.20123	.10240
125	1.15562	.40506	.18414	.09186
130	1.09596	.37797	.16870	.08249
135	1.04087	.35315	.15473	.07414
140	.98986	.33035	.14205	.06668
145	.94250	.30936	.13053	.06002
150	.89843	.28999	.12004	.05406
155	.85734	.27208	.11048	.04871
160	.81893	.25550	.10175	.04392

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

YEARS	RATE OF INTEREST .025	.030	.035	.040
5	7.60987	6.27849	5.32804	4.61568
10	3.57035	2.90768	2.43547	2.08227
15	2.23066	1.79222	1.48072	1.24853
20	1.56589	1.24052	1.01032	.83954
25	1.17104	.91426	.73354	.60030
30	.91111	.70064	.55347	.44575
35	.72822	.55131	.42852	.33943
40	.59345	.44208	.33792	.26309
45	.49070	.35951	.27010	.20656
50	.41032	.29552	.21811	.16376
55	.34617	.24497	.17752	.13078
60	.29414	.20443	.14539	.10505
65	.25139	.17153	.11966	.08475
70	.21588	.14455	.09888	.06863
75	.18614	.12227	.08198	.05573
80	.16104	.10372	.06814	.04535
85	.13972	.08822	.05676	.03698
90	.12152	.07519	.04737	.03019
95	.10591	.06419	.03958	.02468
100	.09248	.05489	.03312	.02020
105	.08087	.04699	.02774	.01654
110	.07081	.04028	.02326	.01356
115	.06207	.03455	.01951	.01112
120	.05447	.02966	.01638	.00912
125	.04784	.02548	.01375	.00748
130	.04205	.02191	.01155	.00614
135	.03699	.01884	.00971	.00504
140	.03255	.01621	.00816	.00414
145	.02866	.01395	.00686	.00340
150	.02525	.01201	.00577	.00279
155	.02225	.01034	.00486	.00230
160	.01962	.00891	.00409	.00189

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TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
5	4.06204	3.61950	3.25775	2.95661
10	1.80842	1.59009	1.41214	1.26447
15	1.06920	.92685	.81137	.71605
20	.70836	.60485	.52144	.45308
25	.49865	.41905	.35544	.30378
30	.36426	.30103	.25101	.21082
35	.27268	.22143	.18136	.14956
40	.20763	.16556	.13310	.10769
45	.16004	.12523	.09875	.07834
50	.12449	.09553	.07384	.05740
55	.09750	.07334	.05554	.04228
60	.07676	.05656	.04195	.03126
65	.06068	.04378	.03178	.02318
70	.04811	.03398	.02414	.01722
75	.03825	.02643	.01836	.01281
80	.03046	.02059	.01399	.00954
85	.02430	.01606	.01067	.00711
90	.01940	.01254	.00814	.00531
95	.01551	.00980	.00622	.00396
100	.01241	.00766	.00475	.00296
105	.00993	.00599	.00363	.00221
110	.00796	.00469	.00278	.00165
115	.00637	.00367	.00212	.00123
120	.00511	.00287	.00162	.00092
125	.00409	.00225	.00124	.00069
130	.00328	.00176	.00095	.00051
135	.00263	.00138	.00073	.00038
140	.00211	.00108	.00056	.00029
145	.00169	.00085	.00043	.00021
150	.00136	.00066	.00033	.00016
155	.00109	.00052	.00025	.00012
160	.00087	.00041	.00019	.00009

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS
FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	2.48415	2.13071	1.85658	1.63797
10	1.03396	.86287	.73133	.62745
15	.56849	.46037	.37843	.31474
20	.34847	.27315	.21718	.17460
25	.22586	.17098	.13118	.10168
30	.15123	.11034	.08152	.06079
35	.10334	.07254	.05151	.03690
40	.07156	.04825	.03288	.02259
45	.04999	.03234	.02113	.01391
50	.03514	.02179	.01363	.00859
55	.02480	.01472	.00882	.00532
60	.01756	.00997	.00571	.00330
65	.01246	.00677	.00371	.00204
70	.00885	.00460	.00241	.00127
75	.00629	.00312	.00156	.00079
80	.00448	.00212	.00101	.00049
85	.00319	.00144	.00066	.00030
90	.00227	.00098	.00043	.00019
95	.00162	.00067	.00028	.00012
100	.00115	.00045	.00018	.00007
105	.00082	.00031	.00012	.00005
110	.00059	.00021	.00008	.00003
115	.00042	.00014	.00005	.00002
120	.00030	.00010	.00003	.00001
125	.00021	.00007	.00002	.00001
130	.00015	.00005	.00001	.00000
135	.00011	.00003	.00001	.00000
140	.00008	.00002	.00001	.00000
145	.00005	.00001	.00000	.00000
150	.00004	.00001	.00000	.00000
155	.00003	.00001	.00000	.00000
160	.00002	.00000	.00000	.00000

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS
FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	1.45973	1.31175	1.18703	1.08060
10	.54365	.47487	.41761	.36938
15	.26423	.22354	.19032	.16292
20	.14160	.11566	.09503	.07847
25	.07946	.06250	.04943	.03927
30	.04568	.03453	.02624	.02002
35	.02661	.01931	.01407	.01030
40	.01562	.01086	.00759	.00532
45	.00921	.00614	.00410	.00276
50	.00545	.00347	.00222	.00143
55	.00323	.00197	.00121	.00074
60	.00191	.00112	.00065	.00039
65	.00113	.00063	.00035	.00020
70	.00067	.00036	.00019	.00010
75	.00040	.00020	.00010	.00005
80	.00024	.00012	.00006	.00003
85	.00014	.00007	.00003	.00001
90	.00008	.00004	.00002	.00001
95	.00005	.00002	.00001	.00000
100	.00003	.00001	.00000	.00000
105	.00002	.00001	.00000	.00000
110	.00001	.00000	.00000	.00000
115	.00001	.00000	.00000	.00000
120	.00000	.00000	.00000	.00000
125	.00000	.00000	.00000	.00000
130	.00000	.00000	.00000	.00000
135	.00000	.00000	.00000	.00000
140	.00000	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 4. DISCOUNTED PERIODIC PAYMENT MULTIPLIER
THE PRESENT VALUE OF A ONE DOLLAR PAYMENT N YEARS
FROM NOW AND EVERY N YEARS THEREAFTER

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
5	.98877	.67190	.48739	.36861
10	.32835	.19261	.12029	.07821
15	.14011	.06941	.03647	.01993
20	.06508	.02678	.01166	.00529
25	.03133	.01059	.00379	.00142
30	.01533	.00423	.00124	.00038
35	.00757	.00170	.00041	.00010
40	.00375	.00068	.00013	.00003
45	.00186	.00027	.00004	.00001
50	.00092	.00011	.00001	.00000
55	.00046	.00004	.00000	.00000
60	.00023	.00002	.00000	.00000
65	.00011	.00001	.00000	.00000
70	.00006	.00000	.00000	.00000
75	.00003	.00000	.00000	.00000
80	.00001	.00000	.00000	.00000
85	.00001	.00000	.00000	.00000
90	.00000	.00000	.00000	.00000
95	.00000	.00000	.00000	.00000
100	.00000	.00000	.00000	.00000
105	.00000	.00000	.00000	.00000
110	.00000	.00000	.00000	.00000
115	.00000	.00000	.00000	.00000
120	.00000	.00000	.00000	.00000
125	.00000	.00000	.00000	.00000
130	.00000	.00000	.00000	.00000
135	.00000	.00000	.00000	.00000
140	.00000	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

U.S. DEPT. AGR., FOREST SERVICE. 1970.

Table 5.--Compounded Annual Payment Multiplier

The future value in n years of an annual payment of $1 for n years.

$$\frac{(1+i)^n - 1}{i}$$

This multiplier is used to find the future value (V_n) in n years of an annual payment (a) for n years.

To find the future value, multiply the annual payment by the multiplier for the desired interest rate i and years n:

$$V_n = a\left[\frac{(1+i)^n - 1}{i}\right]$$

Example: Determine the accumulated per-acre cost at the end of a 60-year rotation of an annual payment of $0.50 per acre for property taxes and administrative expenses, with an interest rate of 5 percent.

Annual cost:	a = $.50 per acre
Interest rate:	$i = .05$
Years:	$n = 60$
Multiplier:	= 353.58372 (page 69)
Future value:	V_n = $.50 (353.58) = $176.79 per acre

Notes

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	1.00000	1.00000	1.00000	1.00000
2	2.00500	2.01000	2.01500	2.02000
3	3.01502	3.03010	3.04522	3.06040
4	4.03010	4.06040	4.09090	4.12161
5	5.05025	5.10101	5.15227	5.20404
6	6.07550	6.15202	6.22955	6.30812
7	7.10588	7.21354	7.32299	7.43428
8	8.14141	8.28567	8.43284	8.58297
9	9.18212	9.36853	9.55933	9.75463
10	10.22803	10.46221	10.70272	10.94972
11	11.27917	11.56683	11.86326	12.16872
12	12.33556	12.68250	13.04121	13.41209
13	13.39724	13.80933	14.23683	14.68033
14	14.46423	14.94742	15.45038	15.97394
15	15.53655	16.09690	16.68214	17.29342
16	16.61423	17.25786	17.93237	18.63929
17	17.69730	18.43044	19.20136	20.01207
18	18.78579	19.61475	20.48938	21.41231
19	19.87972	20.81090	21.79672	22.84056
20	20.97912	22.01900	23.12367	24.29737
21	22.08401	23.23919	24.47052	25.78332
22	23.19443	24.47159	25.83758	27.29898
23	24.31040	25.71630	27.22514	28.84496
24	25.43196	26.97346	28.63352	30.42186
25	26.55912	28.24320	30.06302	32.03030
26	27.69191	29.52563	31.51397	33.67091
27	28.83037	30.82089	32.98668	35.34432
28	29.97452	32.12910	34.48148	37.05121
29	31.12439	33.45039	35.99870	38.79223
30	32.28002	34.78489	37.53868	40.56808
31	33.44142	36.13274	39.10176	42.37944
32	34.60862	37.49407	40.68829	44.22703
33	35.78167	38.86901	42.29861	46.11157
34	36.96058	40.25770	43.93309	48.03380
35	38.14538	41.66028	45.59209	49.99448
36	39.33610	43.07688	47.27597	51.99437
37	40.53279	44.50765	48.98511	54.03425
38	41.73545	45.95272	50.71989	56.11494
39	42.94413	47.41225	52.48068	58.23724
40	44.15885	48.88637	54.26789	60.40198

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .025	.030	.035	.040
1	1.00000	1.00000	1.00000	1.00000
2	2.02500	2.03000	2.03500	2.04000
3	3.07562	3.09090	3.10622	3.12160
4	4.15252	4.18363	4.21494	4.24646
5	5.25633	5.30914	5.36247	5.41632
6	6.38774	6.46841	6.55015	6.63298
7	7.54743	7.66246	7.77941	7.89829
8	8.73612	8.89234	9.05169	9.21423
9	9.95452	10.15911	10.36850	10.58280
10	11.20338	11.46388	11.73139	12.00611
11	12.48347	12.80780	13.14199	13.48635
12	13.79555	14.19203	14.60196	15.02581
13	15.14044	15.61779	16.11303	16.62684
14	16.51895	17.08632	17.67699	18.29191
15	17.93193	18.59891	19.29568	20.02359
16	19.38022	20.15688	20.97103	21.82453
17	20.86473	21.76159	22.70502	23.69751
18	22.38635	23.41444	24.49969	25.64541
19	23.94601	25.11687	26.35718	27.67123
20	25.54466	26.87037	28.27968	29.77808
21	27.18327	28.67649	30.26947	31.96920
22	28.86286	30.53678	32.32890	34.24797
23	30.58443	32.45288	34.46041	36.61789
24	32.34904	34.42647	36.66653	39.08260
25	34.15776	36.45926	38.94986	41.64591
26	36.01171	38.55304	41.31310	44.31174
27	37.91200	40.70963	43.75906	47.08421
28	39.85980	42.93092	46.29063	49.96758
29	41.85630	45.21885	48.91080	52.96629
30	43.90270	47.57542	51.62268	56.08494
31	46.00027	50.00268	54.42947	59.32834
32	48.15028	52.50276	57.33450	62.70147
33	50.35403	55.07784	60.34121	66.20953
34	52.61289	57.73018	63.45315	69.85791
35	54.92821	60.46208	66.67401	73.65222
36	57.30141	63.27594	70.00760	77.59831
37	59.73395	66.17422	73.45787	81.70225
38	62.22730	69.15945	77.02889	85.97034
39	64.78298	72.23423	80.72491	90.40915
40	67.40255	75.40126	84.55028	95.02552

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
1	1.00000	1.00000	1.00000	1.00000
2	2.04500	2.05000	2.05500	2.06000
3	3.13702	3.15250	3.16803	3.18360
4	4.27819	4.31012	4.34227	4.37462
5	5.47071	5.52563	5.58109	5.63709
6	6.71689	6.80191	6.88805	6.97532
7	8.01915	8.14201	8.26689	8.39384
8	9.38001	9.54911	9.72157	9.89747
9	10.80211	11.02656	11.25626	11.49132
10	12.28821	12.57789	12.87535	13.18079
11	13.84118	14.20679	14.58350	14.97164
12	15.46403	15.91713	16.38559	16.86994
13	17.15991	17.71298	18.28680	18.88214
14	18.93211	19.59863	20.29257	21.01507
15	20.78405	21.57856	22.40866	23.27597
16	22.71934	23.65749	24.64114	25.67253
17	24.74171	25.84037	26.99640	28.21288
18	26.85508	28.13238	29.48120	30.90565
19	29.06356	30.53900	32.10267	33.75999
20	31.37142	33.06595	34.86832	36.78559
21	33.78314	35.71925	37.78608	39.99273
22	36.30338	38.50521	40.86431	43.39229
23	38.93703	41.43048	44.11185	46.99583
24	41.68920	44.50200	47.53800	50.81558
25	44.56521	47.72710	51.15259	54.86451
26	47.57064	51.11345	54.96598	59.15638
27	50.71132	54.66913	58.98911	63.70577
28	53.99333	58.40258	63.23351	68.52811
29	57.42303	62.32271	67.71135	73.63980
30	61.00707	66.43885	72.43548	79.05819
31	64.75239	70.76079	77.41943	84.80168
32	68.66625	75.29883	82.67750	90.88978
33	72.75623	80.06377	88.22476	97.34316
34	77.03026	85.06696	94.07712	104.18375
35	81.49662	90.32031	100.25136	111.43478
36	86.16397	95.83632	106.76519	119.12087
37	91.04134	101.62814	113.63727	127.26812
38	96.13820	107.70955	120.88732	135.90421
39	101.46442	114.09502	128.53613	145.05846
40	107.03032	120.79977	136.60561	154.76197

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
1	1.00000	1.00000	1.00000	1.00000
2	2.07000	2.08000	2.09000	2.10000
3	3.21490	3.24640	3.27810	3.31000
4	4.43994	4.50611	4.57313	4.64100
5	5.75074	5.86660	5.98471	6.10510
6	7.15329	7.33593	7.52333	7.71561
7	8.65402	8.92280	9.20043	9.48717
8	10.25980	10.63663	11.02847	11.43589
9	11.97799	12.48756	13.02104	13.57948
10	13.81645	14.48656	15.19293	15.93742
11	15.78360	16.64549	17.56029	18.53117
12	17.88845	18.97713	20.14072	21.38428
13	20.14064	21.49530	22.95338	24.52271
14	22.55049	24.21492	26.01919	27.97498
15	25.12902	27.15211	29.36092	31.77248
16	27.88805	30.32428	33.00340	35.94973
17	30.84022	33.75023	36.97370	40.54470
18	33.99903	37.45024	41.30134	45.59917
19	37.37896	41.44626	46.01846	51.15909
20	40.99549	45.76196	51.16012	57.27500
21	44.86518	50.42292	56.76453	64.00250
22	49.00574	55.45676	62.87334	71.40275
23	53.43614	60.89330	69.53194	79.54302
24	58.17667	66.76476	76.78981	88.49733
25	63.24904	73.10594	84.70090	98.34706
26	68.67647	79.95442	93.32398	109.18177
27	74.48382	87.35077	102.72313	121.09994
28	80.69769	95.33883	112.96822	134.20994
29	87.34653	103.96594	124.13536	148.63093
30	94.46079	113.28321	136.30754	164.49402
31	102.07304	123.34587	149.57522	181.94342
32	110.21815	134.21354	164.03699	201.13777
33	118.93343	145.95062	179.80032	222.25154
34	128.25876	158.62667	196.98234	245.47670
35	138.23688	172.31680	215.71075	271.02437
36	148.91346	187.10215	236.12472	299.12681
37	160.33740	203.07032	258.37595	330.03949
38	172.56102	220.31595	282.62978	364.04343
39	185.64029	238.94122	309.06646	401.44778
40	199.63511	259.05652	337.88245	442.59256

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .110	.120	.130	.140
1	1.00000	1.00000	1.00000	1.00000
2	2.11000	2.12000	2.13000	2.14000
3	3.34210	3.37440	3.40690	3.43960
4	4.70973	4.77933	4.84980	4.92114
5	6.22780	6.35285	6.48027	6.61010
6	7.91286	8.11519	8.32271	8.53552
7	9.78327	10.08901	10.40466	10.73049
8	11.85943	12.29969	12.75726	13.23276
9	14.16397	14.77566	15.41571	16.08535
10	16.72201	17.54874	18.41975	19.33730
11	19.56143	20.65458	21.81432	23.04452
12	22.71319	24.13313	25.65018	27.27075
13	26.21164	28.02911	29.98470	32.08865
14	30.09492	32.39260	34.88271	37.58107
15	34.40536	37.27971	40.41746	43.84241
16	39.18995	42.75328	46.67173	50.98035
17	44.50084	48.88367	53.73906	59.11760
18	50.39594	55.74971	61.72514	68.39407
19	56.93949	63.43968	70.74941	78.96923
20	64.20283	72.05244	80.94683	91.02493
21	72.26514	81.69874	92.46992	104.76842
22	81.21431	92.50258	105.49101	120.43600
23	91.14788	104.60289	120.20484	138.29704
24	102.17415	118.15524	136.83147	158.65862
25	114.41331	133.33387	155.61956	181.87083
26	127.99877	150.33393	176.85010	208.33274
27	143.07864	169.37401	200.84061	238.49933
28	159.81729	190.69889	227.94989	272.88923
29	178.39719	214.58275	258.58338	312.09373
30	199.02088	241.33268	293.19922	356.78685
31	221.91317	271.29261	332.31511	407.73701
32	247.32362	304.84772	376.51608	465.82019
33	275.52922	342.42945	426.46317	532.03501
34	306.83744	384.52098	482.90338	607.51991
35	341.58955	431.66350	546.68082	693.57270
36	380.16441	484.46312	618.74933	791.67288
37	422.98249	543.59869	700.18674	903.50708
38	470.51056	609.83053	792.21101	1030.99808
39	523.26673	684.01020	896.19845	1176.33781
40	581.82607	767.09142	1013.70424	1342.02510

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .150	.200	.250	.300
1	1.00000	1.00000	1.00000	1.00000
2	2.15000	2.20000	2.25000	2.30000
3	3.47250	3.64000	3.81250	3.99000
4	4.99337	5.36800	5.76563	6.18700
5	6.74238	7.44160	8.20703	9.04310
6	8.75374	9.92992	11.25879	12.75603
7	11.06680	12.91590	15.07349	17.58284
8	13.72682	16.49908	19.84186	23.85769
9	16.78584	20.79890	25.80232	32.01500
10	20.30372	25.95868	33.25290	42.61950
11	24.34928	32.15042	42.56613	56.40535
12	29.00167	39.58050	54.20766	74.32695
13	34.35192	48.49660	68.75958	97.62504
14	40.50471	59.19592	86.94947	127.91255
15	47.58041	72.03511	109.68684	167.28631
16	55.71747	87.44213	138.10855	218.47220
17	65.07509	105.93056	173.63568	285.01386
18	75.83636	128.11667	218.04460	371.51802
19	88.21181	154.74000	273.55576	483.97343
20	102.44358	186.68800	342.94470	630.16546
21	118.81012	225.02560	429.68087	820.21510
22	137.63164	271.03072	538.10109	1067.27963
23	159.27638	326.23686	673.62636	1388.46351
24	184.16784	392.48424	843.03295	1806.00257
25	212.79302	471.98108	1054.79118	2348.80334
26	245.71197	567.37730	1319.48898	3054.44434
27	283.56877	681.85276	1650.36123	3971.77764
28	327.10408	819.22331	2063.95153	5164.31093
29	377.16969	984.06797	2580.93941	6714.60421
30	434.74515	1181.88157	3227.17427	8729.98548
31	500.95692	1419.25788	4034.96783	11349.98112
32	577.10046	1704.10946	5044.70979	14755.97546
33	664.66552	2045.93135	6306.88724	19183.76810
34	765.36535	2456.11762	7884.60905	24939.89853
35	881.17016	2948.34115	9856.76132	32422.86808
36	1014.34568	3539.00937	12321.95164	42150.72851
37	1167.49753	4247.81125	15403.43956	54796.94706
38	1343.62216	5098.37350	19255.29944	71237.03118
39	1546.16549	6119.04820	24070.12430	92609.14053
40	1779.09031	7343.85784	30088.65538	120392.88269

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .005	.010	.015	.020
5	5.05025	5.10101	5.15227	5.20404
10	10.22803	10.46221	10.70272	10.94972
15	15.53655	16.09690	16.68214	17.29342
20	20.97912	22.01900	23.12367	24.29737
25	26.55912	28.24320	30.06302	32.03030
30	32.28002	34.78489	37.53868	40.56808
35	38.14538	41.66028	45.59209	49.99448
40	44.15885	48.88637	54.26789	60.40198
45	50.32416	56.48107	63.61420	71.89271
50	56.64516	64.46318	73.68283	84.57940
55	63.12577	72.85246	84.52960	98.58653
60	69.77003	81.66967	96.21465	114.05154
65	76.58206	90.93665	108.80277	131.12616
70	83.56611	100.67634	122.36375	149.97791
75	90.72650	110.91285	136.97278	170.79177
80	98.06771	121.67152	152.71085	193.77196
85	105.59430	132.97900	169.66523	219.14394
90	113.31094	144.86327	187.92990	247.15666
95	121.22243	157.35376	207.60614	278.08496
100	129.33370	170.48138	228.80304	312.23231
105	137.64979	184.27865	251.63813	349.93374
110	146.17587	198.77972	276.23799	391.55916
115	154.91724	214.02049	302.73904	437.51699
120	163.87935	230.03869	331.28819	488.25815
125	173.06776	246.87398	362.04374	544.28049
130	182.48818	264.56804	395.17619	606.13368
135	192.14649	283.16467	430.86926	674.42460
140	202.04868	302.70992	469.32083	749.82330
145	212.20091	323.25217	510.74409	833.06955
150	222.60950	344.84229	555.36870	924.98014
155	233.28092	367.53372	603.44208	1026.45685
160	244.22181	391.38264	655.23077	1138.49535

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	5.25633	5.30914	5.36247	5.41632
10	11.20338	11.46388	11.73139	12.00611
15	17.93193	18.59891	19.29568	20.02359
20	25.54466	26.87037	28.27968	29.77808
25	34.15776	36.45926	38.94986	41.64591
30	43.90270	47.57542	51.62268	56.08494
35	54.92821	60.46208	66.67401	73.65222
40	67.40255	75.40126	84.55028	95.02552
45	81.51613	92.71986	105.78167	121.02939
50	97.48435	112.79687	130.99791	152.66708
55	115.55092	136.07162	160.94689	191.15917
60	135.99159	163.05344	196.51688	237.99069
65	159.11833	194.33276	238.76288	294.96838
70	185.28411	230.59406	288.93786	364.29046
75	214.88830	272.63086	348.53001	448.63137
80	248.38271	321.36302	419.30679	551.24498
85	286.27857	377.85695	503.36739	676.09012
90	329.15425	443.34890	603.20503	827.98333
95	377.66415	519.27203	721.78082	1012.78465
100	432.54865	607.28773	862.61166	1237.62370
105	494.64543	709.32206	1029.87452	1511.17479
110	564.90223	827.60781	1228.53033	1843.99152
115	644.39135	964.73341	1464.47111	2248.91396
120	734.32599	1123.69957	1744.69475	2741.56402
125	836.07879	1307.98492	2077.51253	3340.94814
130	951.20274	1521.62214	2472.79564	4070.19058
135	1081.45492	1769.28623	2942.26799	4957.42550
140	1228.82330	2056.39679	3499.85386	6036.88245
145	1395.55711	2389.23663	4162.09097	7350.20688
150	1584.20110	2775.08921	4948.62092	8948.06685
155	1797.63446	3222.39812	5882.77176	10892.10783
160	2039.11472	3740.95173	6992.24993	13257.33093

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .045	.050	.055	.060
5	5.47071	5.52563	5.58109	5.63709
10	12.28821	12.57789	12.87535	13.18079
15	20.78405	21.57856	22.40866	23.27597
20	31.37142	33.06595	34.86832	36.78559
25	44.56521	47.72710	51.15259	54.86451
30	61.00707	66.43885	72.43548	79.05819
35	81.49662	90.32031	100.25136	111.43478
40	107.03032	120.79977	136.60561	154.76197
45	138.84997	159.70016	184.11917	212.74351
50	178.50303	209.34800	246.21748	290.33590
55	227.91796	272.71262	327.37749	394.17203
60	289.49795	353.58372	433.45037	533.12818
65	366.23783	456.79801	572.08339	719.08286
70	461.86968	588.52851	753.27120	967.93217
75	581.04436	756.65372	990.07643	1300.94868
80	729.55770	971.22882	1299.57139	1746.59989
85	914.63234	1245.08707	1704.06892	2342.98174
90	1145.26901	1594.60730	2232.73102	3141.07519
95	1432.68426	2040.69353	2923.67123	4209.10425
100	1790.85596	2610.02516	3826.70247	5638.36806
105	2237.20306	3336.65262	5006.92817	7551.04544
110	2793.43275	4264.03385	6549.43597	10110.63924
115	3486.59614	5447.63341	8565.43196	13535.95314
120	4350.40385	6958.23971	11200.25810	18119.79580
125	5426.86541	8886.19868	14643.87050	24254.01129
130	6768.33236	11346.81717	19144.53417	32462.97536
135	8440.04424	14487.25918	25026.72159	43448.42105
140	10523.30140	18495.34742	32714.50530	58149.42544
145	13119.41884	23610.79653	42762.13115	77822.68554
150	16354.65350	30139.54992	55893.97629	104149.94540
155	20386.34450	38472.07750	73056.77270	139381.75794
160	25410.56499	49106.72881	95487.86121	186529.87061

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
5	5.75074	5.86660	5.98471	6.10510
10	13.81645	14.48656	15.19293	15.93742
15	25.12902	27.15211	29.36092	31.77248
20	40.99549	45.76196	51.16012	57.27500
25	63.24904	73.10594	84.70090	98.34706
30	94.46079	113.28321	136.30754	164.49402
35	138.23688	172.31680	215.71075	271.02437
40	199.63511	259.05652	337.88245	442.59256
45	285.74931	386.50562	525.85873	718.90484
50	406.52893	573.77016	815.08356	1163.90853
55	575.92859	848.92320	1260.09180	1880.59142
60	813.52038	1253.21330	1944.79213	3034.81640
65	1146.75516	1847.24808	2998.28847	4893.70725
70	1614.13417	2720.08007	4619.22318	7887.46957
75	2269.65742	4002.55662	7113.23215	12708.95371
80	3189.06268	5886.93543	10950.57409	20474.00215
85	4478.57612	8655.70611	16854.80033	32979.69030
90	6287.18543	12723.93862	25939.18425	53120.22612
95	8823.85354	18701.50686	39916.63496	85556.76047
100	12381.66179	27484.51570	61422.67546	137796.12340
105	17371.67192	40389.63720	94512.38455	221928.13979
110	24370.41925	59351.49455	145425.00362	357423.59352
115	34186.52444	87212.68395	223760.37892	575640.37670
120	47954.11976	128149.91178	344289.06388	927080.68818
125	67263.88440	188300.13002	529737.38581	999999.99999
130	94346.82821	276680.53451	815072.61632	999999.99999
135	132332.05793	406540.34425	999999.99999	999999.99999
140	185608.30762	597347.00877	999999.99999	999999.99999
145	260331.00383	877704.59817	999999.99999	999999.99999
150	365133.45071	999999.99999	999999.99999	999999.99999
155	512124.30397	999999.99999	999999.99999	999999.99999
160	718286.57961	999999.99999	999999.99999	999999.99999

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TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	6.22780	6.35285	6.48027	6.61010
10	16.72201	17.54874	18.41975	19.33730
15	34.40536	37.27971	40.41746	43.84241
20	64.20283	72.05244	80.94683	91.02493
25	114.41331	133.33387	155.61956	181.87083
30	199.02088	241.33268	293.19922	356.78685
35	341.58955	431.66350	546.68082	693.57270
40	581.82607	767.09142	1013.70424	1342.02510
45	986.63856	1358.23003	1874.16463	2590.56480
50	1668.77115	2400.01825	3459.50712	4994.52135
55	2818.20424	4236.00505	6380.39789	9623.13434
60	4755.06584	7471.64111	11761.94979	18535.13328
65	8018.79027	13173.93742	21677.11035	35694.42601
70	13518.35574	23223.33190	39945.15096	68733.17846
75	22785.44339	40933.79867	73602.83163	132346.47421
80	38401.02500	72145.69250	135614.92657	254828.44148
85	64714.18815	127151.71400	249868.19182	490657.00734
90	109053.39829	224091.11853	460372.42707	944724.76699
95	183767.54594	394931.47186	848212.83549	999999.99999
100	309665.22972	696010.54772	999999.99999	999999.99999
105	521810.14850	999999.99999	999999.99999	999999.99999
110	879286.67394	999999.99999	999999.99999	999999.99999
115	999999.99999	999999.99999	999999.99999	999999.99999
120	999999.99999	999999.99999	999999.99999	999999.99999
125	999999.99999	999999.99999	999999.99999	999999.99999
130	999999.99999	999999.99999	999999.99999	999999.99999
135	999999.99999	999999.99999	999999.99999	999999.99999
140	999999.99999	999999.99999	999999.99999	999999.99999
145	999999.99999	999999.99999	999999.99999	999999.99999
150	999999.99999	999999.99999	999999.99999	999999.99999
155	999999.99999	999999.99999	999999.99999	999999.99999
160	999999.99999	999999.99999	999999.99999	999999.99999

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 5. COMPOUNDED ANNUAL PAYMENT MULTIPLIER
THE FUTURE VALUE IN N YEARS OF AN ANNUAL PAYMENT
OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
5	6.74238	7.44160	8.20703	9.04310
10	20.30372	25.95868	33.25290	42.61950
15	47.58041	72.03511	109.68684	167.28631
20	102.44358	186.68800	342.94470	630.16546
25	212.79302	471.98108	1054.79118	2348.80334
30	434.74515	1181.88157	3227.17427	8729.98548
35	881.17016	2948.34115	9856.76132	32422.86808
40	1779.09031	7343.85784	30088.65538	120392.88269
45	3585.12846	18281.30994	91831.49616	447019.38904
50	7217.71628	45497.19075	280255.69286	999999.99999
55	14524.14789	113219.01129	855280.70723	999999.99999
60	29219.99164	281732.57177	999999.99999	999999.99999
65	58778.58258	701048.23458	999999.99999	999999.99999
70	118231.46693	999999.99999	999999.99999	999999.99999
75	237812.45317	999999.99999	999999.99999	999999.99999
80	478332.52934	999999.99999	999999.99999	999999.99999
85	962104.31329	999999.99999	999999.99999	999999.99999
90	999999.99999	999999.99999	999999.99999	999999.99999
95	999999.99999	999999.99999	999999.99999	999999.99999
100	999999.99999	999999.99999	999999.99999	999999.99999
105	999999.99999	999999.99999	999999.99999	999999.99999
110	999999.99999	999999.99999	999999.99999	999999.99999
115	999999.99999	999999.99999	999999.99999	999999.99999
120	999999.99999	999999.99999	999999.99999	999999.99999
125	999999.99999	999999.99999	999999.99999	999999.99999
130	999999.99999	999999.99999	999999.99999	999999.99999
135	999999.99999	999999.99999	999999.99999	999999.99999
140	999999.99999	999999.99999	999999.99999	999999.99999
145	999999.99999	999999.99999	999999.99999	999999.99999
150	999999.99999	999999.99999	999999.99999	999999.99999
155	999999.99999	999999.99999	999999.99999	999999.99999
160	999999.99999	999999.99999	999999.99999	999999.99999

Table 6.--Discounted Annual Payment Multiplier

The present value of an annual payment of $1 for n years.

$$\frac{(1+i)^n - 1}{i(1+i)^n}$$

This multiplier is used to find the present value (V_o) of an annual payment (a) for n years.

To find the present value of this future series of annual payments, multiply the annual payment by the multiplier for the desired interest rate i and years n:

$$V_o = a \left[\frac{(1+i)^n - 1}{i(1+i)^n} \right]$$

Example: Determine the value now of an anticipated series of annual payments for taxes and administration over the next 60 years of $0.50 per acre, using a 5-percent interest rate.

Annual cost: a = $.50 per acre

Interest rate: $i = .05$

Years: $n = 60$

Multiplier: = 18.92929 (page 83)

Present value: V_o = $.50 (18.929) = $9.46 per acre

Notes

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	.99502	.99010	.98522	.98039
2	1.98510	1.97040	1.95588	1.94156
3	2.97025	2.94099	2.91220	2.88388
4	3.95050	3.90197	3.85438	3.80773
5	4.92587	4.85343	4.78264	4.71346
6	5.89638	5.79548	5.69719	5.60143
7	6.86207	6.72819	6.59821	6.47199
8	7.82296	7.65168	7.48593	7.32548
9	8.77906	8.56602	8.36052	8.16224
10	9.73041	9.47130	9.22218	8.98259
11	10.67703	10.36763	10.07112	9.78685
12	11.61893	11.25508	10.90751	10.57534
13	12.55615	12.13374	11.73153	11.34837
14	13.48871	13.00370	12.54338	12.10625
15	14.41662	13.86505	13.34323	12.84926
16	15.33993	14.71787	14.13126	13.57771
17	16.25863	15.56225	14.90765	14.29187
18	17.17277	16.39827	15.67256	14.99203
19	18.08236	17.22601	16.42617	15.67846
20	18.98742	18.04555	17.16864	16.35143
21	19.88798	18.85698	17.90014	17.01121
22	20.78406	19.66038	18.62082	17.65805
23	21.67568	20.45582	19.33086	18.29220
24	22.56287	21.24339	20.03041	18.91393
25	23.44564	22.02316	20.71961	19.52346
26	24.32402	22.79520	21.39863	20.12104
27	25.19803	23.55961	22.06762	20.70690
28	26.06769	24.31644	22.72672	21.28127
29	26.93302	25.06579	23.37608	21.84438
30	27.79405	25.80771	24.01584	22.39646
31	28.65080	26.54229	24.64615	22.93770
32	29.50328	27.26959	25.26714	23.46833
33	30.35153	27.98969	25.87895	23.98856
34	31.19555	28.70267	26.48173	24.49859
35	32.03537	29.40858	27.07559	24.99862
36	32.87102	30.10751	27.66068	25.48884
37	33.70250	30.79951	28.23713	25.96945
38	34.52985	31.48466	28.80505	26.44064
39	35.35309	32.16303	29.36458	26.90259
40	36.17223	32.83469	29.91585	27.35548

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
1	.97561	.97087	.96618	.96154
2	1.92742	1.91347	1.89969	1.88609
3	2.85602	2.82861	2.80164	2.77509
4	3.76197	3.71710	3.67308	3.62990
5	4.64583	4.57971	4.51505	4.45182
6	5.50813	5.41719	5.32855	5.24214
7	6.34939	6.23028	6.11454	6.00205
8	7.17014	7.01969	6.87396	6.73274
9	7.97087	7.78611	7.60769	7.43533
10	8.75206	8.53020	8.31661	8.11090
11	9.51421	9.25262	9.00155	8.76048
12	10.25776	9.95400	9.66333	9.38507
13	10.98318	10.63496	10.30274	9.98565
14	11.69091	11.29607	10.92052	10.56312
15	12.38138	11.93794	11.51741	11.11839
16	13.05500	12.56110	12.09412	11.65230
17	13.71220	13.16612	12.65132	12.16567
18	14.35336	13.75351	13.18968	12.65930
19	14.97889	14.32380	13.70984	13.13394
20	15.58916	14.87747	14.21240	13.59033
21	16.18455	15.41502	14.69797	14.02916
22	16.76541	15.93692	15.16712	14.45112
23	17.33211	16.44361	15.62041	14.85684
24	17.88499	16.93554	16.05837	15.24696
25	18.42438	17.41315	16.48151	15.62208
26	18.95061	17.87684	16.89035	15.98277
27	19.46401	18.32703	17.28536	16.32959
28	19.96489	18.76411	17.66702	16.66306
29	20.45355	19.18845	18.03577	16.98371
30	20.93029	19.60044	18.39205	17.29203
31	21.39541	20.00043	18.73628	17.58849
32	21.84918	20.38877	19.06887	17.87355
33	22.29188	20.76579	19.39021	18.14765
34	22.72379	21.13184	19.70068	18.41120
35	23.14516	21.48722	20.00066	18.66461
36	23.55625	21.83225	20.29049	18.90828
37	23.95732	22.16724	20.57053	19.14258
38	24.34860	22.49246	20.84109	19.36786
39	24.73034	22.80822	21.10250	19.58448
40	25.10278	23.11477	21.35507	19.79277

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .045	.050	.055	.060
1	.95694	.95238	.94787	.94340
2	1.87267	1.85941	1.84632	1.83339
3	2.74896	2.72325	2.69793	2.67301
4	3.58753	3.54595	3.50515	3.46511
5	4.38998	4.32948	4.27028	4.21236
6	5.15787	5.07569	4.99553	4.91732
7	5.89270	5.78637	5.68297	5.58238
8	6.59589	6.46321	6.33457	6.20979
9	7.26879	7.10782	6.95220	6.80169
10	7.91272	7.72173	7.53763	7.36009
11	8.52892	8.30641	8.09254	7.88687
12	9.11858	8.86325	8.61852	8.38384
13	9.68285	9.39357	9.11708	8.85268
14	10.22283	9.89864	9.58965	9.29498
15	10.73955	10.37966	10.03758	9.71225
16	11.23402	10.83777	10.46216	10.10590
17	11.70719	11.27407	10.86461	10.47726
18	12.15999	11.68959	11.24607	10.82760
19	12.59329	12.08532	11.60765	11.15812
20	13.00794	12.46221	11.95038	11.46992
21	13.40472	12.82115	12.27524	11.76408
22	13.78442	13.16300	12.58317	12.04158
23	14.14777	13.48857	12.87504	12.30338
24	14.49548	13.79864	13.15170	12.55036
25	14.82821	14.09394	13.41393	12.78336
26	15.14661	14.37519	13.66250	13.00317
27	15.45130	14.64303	13.89810	13.21053
28	15.74287	14.89813	14.12142	13.40616
29	16.02189	15.14107	14.33310	13.59072
30	16.28889	15.37245	14.53375	13.76483
31	16.54439	15.59281	14.72393	13.92909
32	16.78889	15.80268	14.90420	14.08404
33	17.02286	16.00255	15.07507	14.23023
34	17.24676	16.19290	15.23703	14.36814
35	17.46101	16.37419	15.39055	14.49825
36	17.66604	16.54685	15.53607	14.62099
37	17.86224	16.71129	15.67400	14.73678
38	18.04999	16.86789	15.80474	14.84602
39	18.22966	17.01704	15.92866	14.94907
40	18.40158	17.15909	16.04612	15.04630

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
1	.93458	.92593	.91743	.90909
2	1.80802	1.78326	1.75911	1.73554
3	2.62432	2.57710	2.53129	2.48685
4	3.38721	3.31213	3.23972	3.16987
5	4.10020	3.99271	3.88965	3.79079
6	4.76654	4.62288	4.48592	4.35526
7	5.38929	5.20637	5.03295	4.86842
8	5.97130	5.74664	5.53482	5.33493
9	6.51523	6.24689	5.99525	5.75902
10	7.02358	6.71008	6.41766	6.14457
11	7.49867	7.13896	6.80519	6.49506
12	7.94269	7.53608	7.16073	6.81369
13	8.35765	7.90378	7.48690	7.10336
14	8.74547	8.24424	7.78615	7.36669
15	9.10791	8.55948	8.06069	7.60608
16	9.44665	8.85137	8.31256	7.82371
17	9.76322	9.12164	8.54363	8.02155
18	10.05909	9.37189	8.75563	8.20141
19	10.33560	9.60360	8.95011	8.36492
20	10.59401	9.81815	9.12855	8.51356
21	10.83553	10.01680	9.29224	8.64869
22	11.06124	10.20074	9.44243	8.77154
23	11.27219	10.37106	9.58021	8.88322
24	11.46933	10.52876	9.70661	8.98474
25	11.65358	10.67478	9.82258	9.07704
26	11.82578	10.80998	9.92897	9.16095
27	11.98671	10.93516	10.02658	9.23722
28	12.13711	11.05108	10.11613	9.30657
29	12.27767	11.15841	10.19828	9.36961
30	12.40904	11.25778	10.27365	9.42691
31	12.53181	11.34980	10.34280	9.47901
32	12.64656	11.43500	10.40624	9.52638
33	12.75379	11.51389	10.46444	9.56943
34	12.85401	11.58693	10.51784	9.60857
35	12.94767	11.65457	10.56682	9.64416
36	13.03521	11.71719	10.61176	9.67651
37	13.11702	11.77518	10.65299	9.70592
38	13.19347	11.82887	10.69082	9.73265
39	13.26493	11.87858	10.72552	9.75696
40	13.33171	11.92461	10.75736	9.77905

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TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	.90090	.89286	.88496	.87719
2	1.71252	1.69005	1.66810	1.64666
3	2.44371	2.40183	2.36115	2.32163
4	3.10245	3.03735	2.97447	2.91371
5	3.69590	3.60478	3.51723	3.43308
6	4.23054	4.11141	3.99755	3.88867
7	4.71220	4.56376	4.42261	4.28830
8	5.14612	4.96764	4.79877	4.63886
9	5.53705	5.32825	5.13166	4.94637
10	5.88923	5.65022	5.42624	5.21612
11	6.20652	5.93770	5.68694	5.45273
12	6.49236	6.19437	5.91765	5.66029
13	6.74987	6.42355	6.12181	5.84236
14	6.98187	6.62817	6.30249	6.00207
15	7.19087	6.81086	6.46238	6.14217
16	7.37916	6.97399	6.60388	6.26506
17	7.54879	7.11963	6.72909	6.37286
18	7.70162	7.24967	6.83991	6.46742
19	7.83929	7.36578	6.93797	6.55037
20	7.96333	7.46944	7.02475	6.62313
21	8.07507	7.56200	7.10155	6.68696
22	8.17574	7.64465	7.16951	6.74294
23	8.26643	7.71843	7.22966	6.79206
24	8.34814	7.78432	7.28288	6.83514
25	8.42174	7.84314	7.32998	6.87293
26	8.48806	7.89566	7.37167	6.90608
27	8.54780	7.94255	7.40856	6.93515
28	8.60162	7.98442	7.44120	6.96066
29	8.65011	8.02181	7.47009	6.98304
30	8.69379	8.05518	7.49565	7.00266
31	8.73315	8.08499	7.51828	7.01988
32	8.76860	8.11159	7.53830	7.03498
33	8.80054	8.13535	7.55602	7.04823
34	8.82932	8.15656	7.57170	7.05985
35	8.85524	8.17550	7.58557	7.07005
36	8.87859	8.19241	7.59785	7.07899
37	8.89963	8.20751	7.60872	7.08683
38	8.91859	8.22099	7.61833	7.09371
39	8.93567	8.23303	7.62684	7.09975
40	8.95105	8.24378	7.63438	7.10504

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	.86957	.83333	.80000	.76923
2	1.62571	1.52778	1.44000	1.36095
3	2.28323	2.10648	1.95200	1.81611
4	2.85498	2.58873	2.36160	2.16624
5	3.35216	2.99061	2.68928	2.43557
6	3.78448	3.32551	2.95142	2.64275
7	4.16042	3.60459	3.16114	2.80211
8	4.48732	3.83716	3.32891	2.92470
9	4.77158	4.03097	3.46313	3.01900
10	5.01877	4.19247	3.57050	3.09154
11	5.23371	4.32706	3.65640	3.14734
12	5.42062	4.43922	3.72512	3.19026
13	5.58315	4.53268	3.78010	3.22328
14	5.72448	4.61057	3.82408	3.24867
15	5.84737	4.67547	3.85926	3.26821
16	5.95423	4.72956	3.88741	3.28324
17	6.04716	4.77463	3.90993	3.29480
18	6.12797	4.81219	3.92794	3.30369
19	6.19823	4.84350	3.94235	3.31053
20	6.25933	4.86958	3.95388	3.31579
21	6.31246	4.89132	3.96311	3.31984
22	6.35866	4.90943	3.97049	3.32296
23	6.39884	4.92453	3.97639	3.32535
24	6.43377	4.93710	3.98111	3.32719
25	6.46415	4.94759	3.98489	3.32861
26	6.49056	4.95632	3.98791	3.32970
27	6.51353	4.96360	3.99033	3.33054
28	6.53351	4.96967	3.99226	3.33118
29	6.55088	4.97472	3.99381	3.33168
30	6.56598	4.97894	3.99505	3.33206
31	6.57911	4.98245	3.99604	3.33235
32	6.59053	4.98537	3.99683	3.33258
33	6.60046	4.98781	3.99746	3.33275
34	6.60910	4.98984	3.99797	3.33289
35	6.61661	4.99154	3.99838	3.33299
36	6.62314	4.99295	3.99870	3.33307
37	6.62881	4.99412	3.99896	3.33313
38	6.63375	4.99510	3.99917	3.33318
39	6.63805	4.99592	3.99934	3.33321
40	6.64178	4.99660	3.99947	3.33324

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
5	4.92587	4.85343	4.78264	4.71346
10	9.73041	9.47130	9.22218	8.98259
15	14.41662	13.86505	13.34323	12.84926
20	18.98742	18.04555	17.16864	16.35143
25	23.44564	22.02316	20.71961	19.52346
30	27.79405	25.80771	24.01584	22.39646
35	32.03537	29.40858	27.07559	24.99862
40	36.17223	32.83469	29.91585	27.35548
45	40.20720	36.09451	32.55234	29.49016
50	44.14279	39.19612	34.99969	31.42361
55	47.98145	42.14719	37.27147	33.17479
60	51.72556	44.95504	39.38027	34.76089
65	55.37746	47.62661	41.33779	36.19747
70	58.93942	50.16851	43.15487	37.49862
75	62.41365	52.58705	44.84160	38.67711
80	65.80231	54.88821	46.40732	39.74451
85	69.10750	57.07768	47.86072	40.71129
90	72.33130	59.16088	49.20985	41.58693
95	75.47569	61.14298	50.46220	42.38002
100	78.54264	63.02888	51.62470	43.09835
105	81.53406	64.82325	52.70381	43.74896
110	84.45180	66.53053	53.70550	44.33824
115	87.29767	68.15494	54.63533	44.87197
120	90.07345	69.70052	55.49845	45.35539
125	92.78087	71.17109	56.29966	45.79323
130	95.42161	72.57028	57.04338	46.18980
135	97.99730	73.90156	57.73376	46.54899
140	100.50956	75.16823	58.37460	46.87431
145	102.95994	76.37342	58.96947	47.16897
150	105.34998	77.52012	59.52166	47.43585
155	107.68114	78.61117	60.03424	47.67757
160	109.95489	79.64926	60.51005	47.89650

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .025	.030	.035	.040
5	4.64583	4.57971	4.51505	4.45182
10	8.75206	8.53020	8.31661	8.11090
15	12.38138	11.93794	11.51741	11.11839
20	15.58916	14.87747	14.21240	13.59033
25	18.42438	17.41315	16.48151	15.62208
30	20.93029	19.60044	18.39205	17.29203
35	23.14516	21.48722	20.00066	18.66461
40	25.10278	23.11477	21.35507	19.79277
45	26.83302	24.51871	22.49545	20.72004
50	28.36231	25.72976	23.45562	21.48218
55	29.71398	26.77443	24.26405	22.10861
60	30.90866	27.67556	24.94473	22.62349
65	31.96458	28.45289	25.51785	23.04668
70	32.89786	29.12342	26.00040	23.39451
75	33.72274	29.70183	26.40669	23.68041
80	34.45182	30.20076	26.74878	23.91539
85	35.09621	30.63115	27.03680	24.10853
90	35.66577	31.00241	27.27932	24.26728
95	36.16917	31.32266	27.48350	24.39776
100	36.61411	31.59891	27.65543	24.50500
105	37.00736	31.83720	27.80018	24.59315
110	37.35494	32.04276	27.92206	24.66560
115	37.66216	32.22007	28.02467	24.72514
120	37.93369	32.37302	28.11108	24.77409
125	38.17368	32.50496	28.18382	24.81432
130	38.38580	32.61877	28.24508	24.84738
135	38.57328	32.71695	28.29665	24.87456
140	38.73899	32.80163	28.34007	24.89690
145	38.88545	32.87468	28.37663	24.91526
150	39.01490	32.93770	28.40742	24.93035
155	39.12932	32.99205	28.43333	24.94275
160	39.23044	33.03894	28.45516	24.95295

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .045	.050	.055	.060
5	4.38998	4.32948	4.27028	4.21236
10	7.91272	7.72173	7.53763	7.36009
15	10.73955	10.37966	10.03758	9.71225
20	13.00794	12.46221	11.95038	11.46992
25	14.82821	14.09394	13.41393	12.78336
30	16.28889	15.37245	14.53375	13.76483
35	17.46101	16.37419	15.39055	14.49825
40	18.40158	17.15909	16.04612	15.04630
45	19.15635	17.77407	16.54773	15.45583
50	19.76201	18.25593	16.93152	15.76186
55	20.24802	18.63347	17.22517	15.99054
60	20.63802	18.92929	17.44985	16.16143
65	20.95098	19.16107	17.62177	16.28912
70	21.20211	19.34268	17.75330	16.38454
75	21.40363	19.48497	17.85395	16.45585
80	21.56534	19.59646	17.93095	16.50913
85	21.69511	19.68382	17.98987	16.54895
90	21.79924	19.75226	18.03495	16.57870
95	21.88280	19.80589	18.06945	16.60093
100	21.94985	19.84791	18.09584	16.61755
105	22.00366	19.88083	18.11603	16.62996
110	22.04684	19.90663	18.13148	16.63924
115	22.08148	19.92684	18.14331	16.64617
120	22.10929	19.94268	18.15235	16.65135
125	22.13160	19.95509	18.15927	16.65522
130	22.14950	19.96481	18.16457	16.65811
135	22.16387	19.97243	18.16862	16.66028
140	22.17539	19.97840	18.17172	16.66189
145	22.18464	19.98307	18.17409	16.66310
150	22.19207	19.98674	18.17591	16.66400
155	22.19803	19.98961	18.17729	16.66467
160	22.20281	19.99186	18.17836	16.66518

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	4.10020	3.99271	3.88965	3.79079
10	7.02358	6.71008	6.41766	6.14457
15	9.10791	8.55948	8.06069	7.60608
20	10.59401	9.81815	9.12855	8.51356
25	11.65358	10.67478	9.82258	9.07704
30	12.40904	11.25778	10.27365	9.42691
35	12.94767	11.65457	10.56682	9.64416
40	13.33171	11.92461	10.75736	9.77905
45	13.60552	12.10840	10.88120	9.86281
50	13.80075	12.23348	10.96168	9.91481
55	13.93994	12.31861	11.01399	9.94711
60	14.03918	12.37655	11.04799	9.96716
65	14.10994	12.41598	11.07009	9.97961
70	14.16039	12.44282	11.08445	9.98734
75	14.19636	12.46108	11.09378	9.99214
80	14.22201	12.47351	11.09985	9.99512
85	14.24029	12.48197	11.10379	9.99697
90	14.25333	12.48773	11.10635	9.99812
95	14.26262	12.49165	11.10802	9.99883
100	14.26925	12.49432	11.10910	9.99927
105	14.27398	12.49613	11.10981	9.99955
110	14.27735	12.49737	11.11026	9.99972
115	14.27975	12.49821	11.11056	9.99983
120	14.28146	12.49878	11.11075	9.99989
125	14.28268	12.49917	11.11088	9.99993
130	14.28355	12.49944	11.11096	9.99996
135	14.28417	12.49962	11.11101	9.99997
140	14.28461	12.49974	11.11105	9.99998
145	14.28493	12.49982	11.11107	9.99999
150	14.28516	12.49988	11.11108	9.99999
155	14.28532	12.49992	11.11109	10.00000
160	14.28543	12.49994	11.11110	10.00000

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .110	.120	.130	.140
5	3.69590	3.60478	3.51723	3.43308
10	5.88923	5.65022	5.42624	5.21612
15	7.19087	6.81086	6.46238	6.14217
20	7.96333	7.46944	7.02475	6.62313
25	8.42174	7.84314	7.32998	6.87293
30	8.69379	8.05518	7.49565	7.00266
35	8.85524	8.17550	7.58557	7.07005
40	8.95105	8.24378	7.63438	7.10504
45	9.00791	8.28252	7.66086	7.12322
50	9.04165	8.30450	7.67524	7.13266
55	9.06168	8.31697	7.68304	7.13756
60	9.07356	8.32405	7.68728	7.14011
65	9.08061	8.32807	7.68958	7.14143
70	9.08480	8.33034	7.69083	7.14211
75	9.08728	8.33164	7.69150	7.14247
80	9.08876	8.33237	7.69187	7.14266
85	9.08963	8.33279	7.69207	7.14275
90	9.09015	8.33302	7.69218	7.14280
95	9.09046	8.33316	7.69224	7.14283
100	9.09064	8.33323	7.69227	7.14284
105	9.09075	8.33328	7.69229	7.14285
110	9.09082	8.33330	7.69230	7.14285
115	9.09085	8.33332	7.69230	7.14286
120	9.09088	8.33332	7.69230	7.14286
125	9.09089	8.33333	7.69231	7.14286
130	9.09090	8.33333	7.69231	7.14286
135	9.09090	8.33333	7.69231	7.14286
140	9.09090	8.33333	7.69231	7.14286
145	9.09091	8.33333	7.69231	7.14286
150	9.09091	8.33333	7.69231	7.14286
155	9.09091	8.33333	7.69231	7.14286
160	9.09091	8.33333	7.69231	7.14286

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TABLE 6. DISCOUNTED ANNUAL PAYMENT MULTIPLIER
THE PRESENT VALUE OF AN ANNUAL PAYMENT OF ONE DOLLAR FOR N YEARS

YEARS	RATE OF INTEREST .150	.200	.250	.300
5	3.35216	2.99061	2.68928	2.43557
10	5.01877	4.19247	3.57050	3.09154
15	5.84737	4.67547	3.85926	3.26821
20	6.25933	4.86958	3.95388	3.31579
25	6.46415	4.94759	3.98489	3.32861
30	6.56598	4.97894	3.99505	3.33206
35	6.61661	4.99154	3.99838	3.33299
40	6.64178	4.99660	3.99947	3.33324
45	6.65429	4.99863	3.99983	3.33331
50	6.66051	4.99945	3.99994	3.33333
55	6.66361	4.99978	3.99998	3.33333
60	6.66515	4.99991	3.99999	3.33333
65	6.66591	4.99996	4.00000	3.33333
70	6.66629	4.99999	4.00000	3.33333
75	6.66648	4.99999	4.00000	3.33333
80	6.66657	5.00000	4.00000	3.33333
85	6.66662	5.00000	4.00000	3.33333
90	6.66664	5.00000	4.00000	3.33333
95	6.66666	5.00000	4.00000	3.33333
100	6.66666	5.00000	4.00000	3.33333
105	6.66666	5.00000	4.00000	3.33333
110	6.66667	5.00000	4.00000	3.33333
115	6.66667	5.00000	4.00000	3.33333
120	6.66667	5.00000	4.00000	3.33333
125	6.66667	5.00000	4.00000	3.33333
130	6.66667	5.00000	4.00000	3.33333
135	6.66667	5.00000	4.00000	3.33333
140	6.66667	5.00000	4.00000	3.33333
145	6.66667	5.00000	4.00000	3.33333
150	6.66667	5.00000	4.00000	3.33333
155	6.66667	5.00000	4.00000	3.33333
160	6.66667	5.00000	4.00000	3.33333

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Table 7.--Investment Increase Multiplier

The increase in value of $1 invested for n years.

$$(1+i)^n - 1$$

This multiplier is used to find the increase in value (V'_n), such as compounded investment earnings or interest rate charges, over a period of n years of an initial investment (V_o) compounded for n years at interest rate i.

To find the increase in investment value, multiply the initial investment by the multiplier for the appropriate interest rate i and years n:

$$V'_n = V_o \left[(1+i)^n - 1 \right]$$

Example: Determine the accumulated interest cost at the end of a 40-year rotation for an initial land cost of $10 per acre, compounded at 4-percent interest, when the land value at the end of the rotation remains at $10 per acre.

Land value: V_o = $10 per acre

Interest rate: $i = .04$

Years: $n = 40$

Multiplier: = 3.80102 (page 90)

Compounded interest charges: V'_n = $10 (3.8010) = $38.01 per acre.

Notes

TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR
N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	.00500	.01000	.01500	.02000
2	.01002	.02010	.03022	.04040
3	.01508	.03030	.04568	.06121
4	.02015	.04060	.06136	.08243
5	.02525	.05101	.07728	.10408
6	.03038	.06152	.09344	.12616
7	.03553	.07214	.10984	.14869
8	.04071	.08286	.12649	.17166
9	.04591	.09369	.14339	.19509
10	.05114	.10462	.16054	.21899
11	.05640	.11567	.17795	.24337
12	.06168	.12683	.19562	.26824
13	.06699	.13809	.21355	.29361
14	.07232	.14947	.23176	.31948
15	.07768	.16097	.25023	.34587
16	.08307	.17258	.26899	.37279
17	.08849	.18430	.28802	.40024
18	.09393	.19615	.30734	.42825
19	.09940	.20811	.32695	.45681
20	.10490	.22019	.34686	.48595
21	.11042	.23239	.36706	.51567
22	.11597	.24472	.38756	.54598
23	.12155	.25716	.40838	.57690
24	.12716	.26973	.42950	.60844
25	.13280	.28243	.45095	.64061
26	.13846	.29526	.47271	.67342
27	.14415	.30821	.49480	.70689
28	.14987	.32129	.51722	.74102
29	.15562	.33450	.53998	.77584
30	.16140	.34785	.56308	.81136
31	.16721	.36133	.58653	.84759
32	.17304	.37494	.61032	.88454
33	.17891	.38869	.63448	.92223
34	.18480	.40258	.65900	.96068
35	.19073	.41660	.68388	.99989
36	.19668	.43077	.70914	1.03989
37	.20266	.44508	.73478	1.08069
38	.20868	.45953	.76080	1.12230
39	.21472	.47412	.78721	1.16474
40	.22079	.48886	.81402	1.20804

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
1	.02500	.03000	.03500	.04000
2	.05062	.06090	.07122	.08160
3	.07689	.09273	.10872	.12486
4	.10381	.12551	.14752	.16986
5	.13141	.15927	.18769	.21665
6	.15969	.19405	.22926	.26532
7	.18869	.22987	.27228	.31593
8	.21840	.26677	.31681	.36857
9	.24886	.30477	.36290	.42331
10	.28008	.34392	.41060	.48024
11	.31209	.38423	.45997	.53945
12	.34489	.42576	.51107	.60103
13	.37851	.46853	.56396	.66507
14	.41297	.51259	.61869	.73168
15	.44830	.55797	.67535	.80094
16	.48451	.60471	.73399	.87298
17	.52162	.65285	.79468	.94790
18	.55966	.70243	.85749	1.02582
19	.59865	.75351	.92250	1.10685
20	.63862	.80611	.98979	1.19112
21	.67958	.86029	1.05943	1.27877
22	.72157	.91610	1.13151	1.36992
23	.76461	.97359	1.20611	1.46472
24	.80873	1.03279	1.28333	1.56330
25	.85394	1.09378	1.36324	1.66584
26	.90029	1.15659	1.44596	1.77247
27	.94780	1.22129	1.53157	1.88337
28	.99650	1.28793	1.62017	1.99870
29	1.04641	1.35657	1.71188	2.11865
30	1.09757	1.42726	1.80679	2.24340
31	1.15001	1.50008	1.90503	2.37313
32	1.20376	1.57508	2.00671	2.50806
33	1.25885	1.65234	2.11194	2.64838
34	1.31532	1.73191	2.22086	2.79432
35	1.37321	1.81386	2.33359	2.94609
36	1.43254	1.89828	2.45027	3.10393
37	1.49335	1.98523	2.57103	3.26809
38	1.55568	2.07478	2.69601	3.43881
39	1.61957	2.16703	2.82537	3.61637
40	1.68506	2.26204	2.95926	3.80102

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
1	.04500	.05000	.05500	.06000
2	.09202	.10250	.11303	.12360
3	.14117	.15762	.17424	.19102
4	.19252	.21551	.23882	.26248
5	.24618	.27628	.30696	.33823
6	.30226	.34010	.37884	.41852
7	.36086	.40710	.45468	.50363
8	.42210	.47746	.53469	.59385
9	.48610	.55133	.61909	.68948
10	.55297	.62889	.70814	.79085
11	.62285	.71034	.80209	.89830
12	.69588	.79586	.90121	1.01220
13	.77220	.88565	1.00577	1.13293
14	.85194	.97993	1.11609	1.26090
15	.93528	1.07893	1.23248	1.39656
16	1.02237	1.18287	1.35526	1.54035
17	1.11338	1.29202	1.48480	1.69277
18	1.20848	1.40662	1.62147	1.85434
19	1.30786	1.52695	1.76565	2.02560
20	1.41171	1.65330	1.91776	2.20714
21	1.52024	1.78596	2.07823	2.39956
22	1.63365	1.92526	2.24754	2.60354
23	1.75217	2.07152	2.42615	2.81975
24	1.87601	2.22510	2.61459	3.04893
25	2.00543	2.38635	2.81339	3.29187
26	2.14068	2.55567	3.02313	3.54938
27	2.28201	2.73346	3.24440	3.82235
28	2.42970	2.92013	3.47784	4.11169
29	2.58404	3.11614	3.72412	4.41839
30	2.74532	3.32194	3.98395	4.74349
31	2.91386	3.53804	4.25807	5.08810
32	3.08998	3.76494	4.54726	5.45339
33	3.27403	4.00319	4.85236	5.84059
34	3.46636	4.25335	5.17424	6.25103
35	3.66735	4.51602	5.51383	6.68609
36	3.87738	4.79182	5.87209	7.14725
37	4.09686	5.08141	6.25005	7.63609
38	4.32622	5.38548	6.64880	8.15425
39	4.56590	5.70475	7.06949	8.70351
40	4.81636	6.03999	7.51331	9.28572

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
1	.07000	.08000	.09000	.10000
2	.14490	.16640	.18810	.21000
3	.22504	.25971	.29503	.33100
4	.31080	.36049	.41158	.46410
5	.40255	.46933	.53862	.61051
6	.50073	.58687	.67710	.77156
7	.60578	.71382	.82804	.94872
8	.71819	.85093	.99256	1.14359
9	.83846	.99900	1.17189	1.35795
10	.96715	1.15892	1.36736	1.59374
11	1.10485	1.33164	1.58043	1.85312
12	1.25219	1.51817	1.81266	2.13843
13	1.40985	1.71962	2.06580	2.45227
14	1.57853	1.93719	2.34173	2.79750
15	1.75903	2.17217	2.64248	3.17725
16	1.95216	2.42594	2.97031	3.59497
17	2.15882	2.70002	3.32763	4.05447
18	2.37993	2.99602	3.71712	4.55992
19	2.61653	3.31570	4.14166	5.11591
20	2.86968	3.66096	4.60441	5.72750
21	3.14056	4.03383	5.10881	6.40025
22	3.43040	4.43654	5.65860	7.14027
23	3.74053	4.87146	6.25787	7.95430
24	4.07237	5.34118	6.91108	8.84973
25	4.42743	5.84848	7.62308	9.83471
26	4.80735	6.39635	8.39916	10.91818
27	5.21387	6.98806	9.24508	12.10999
28	5.64884	7.62711	10.16714	13.42099
29	6.11426	8.31727	11.17218	14.86309
30	6.61226	9.06266	12.26768	16.44940
31	7.14511	9.86767	13.46177	18.19434
32	7.71527	10.73708	14.76333	20.11378
33	8.32534	11.67605	16.18203	22.22515
34	8.97811	12.69013	17.72841	24.54767
35	9.67658	13.78534	19.41397	27.10244
36	10.42394	14.96817	21.25123	29.91268
37	11.22362	16.24563	23.25384	33.00395
38	12.07927	17.62528	25.43668	36.40434
39	12.99482	19.11530	27.81598	40.14478
40	13.97446	20.72452	30.40942	44.25926

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	.11000	.12000	.13000	.14000
2	.23210	.25440	.27690	.29960
3	.36763	.40493	.44290	.48154
4	.51807	.57352	.63047	.68896
5	.68506	.76234	.84244	.92541
6	.87041	.97382	1.08195	1.19497
7	1.07616	1.21068	1.35261	1.50227
8	1.30454	1.47596	1.65844	1.85259
9	1.55804	1.77308	2.00404	2.25195
10	1.83942	2.10585	2.39457	2.70722
11	2.15176	2.47855	2.83586	3.22623
12	2.49845	2.89598	3.33452	3.81790
13	2.88328	3.36349	3.89801	4.49241
14	3.31044	3.88711	4.53475	5.26135
15	3.78459	4.47357	5.25427	6.13794
16	4.31089	5.13039	6.06733	7.13725
17	4.89509	5.86604	6.98608	8.27646
18	5.54355	6.68997	8.02427	9.57517
19	6.26334	7.61276	9.19742	11.05569
20	7.06231	8.64629	10.52309	12.74349
21	7.94917	9.80385	12.02109	14.66758
22	8.93357	11.10031	13.71383	16.86104
23	10.02627	12.55235	15.62663	19.36158
24	11.23916	14.17863	17.78809	22.21221
25	12.58546	16.00006	20.23054	25.46192
26	14.07986	18.04007	22.99051	29.16658
27	15.73865	20.32488	26.10928	33.38991
28	17.57990	22.88387	29.63349	38.20449
29	19.62369	25.74993	33.61584	43.69312
30	21.89230	28.95992	38.11590	49.95016
31	24.41045	32.55511	43.20096	57.08318
32	27.20560	36.58173	48.94709	65.21483
33	30.30821	41.09153	55.44021	74.48490
34	33.75212	46.14252	62.77744	85.05279
35	37.57485	51.79962	71.06851	97.10018
36	41.81808	58.13557	80.43741	110.83420
37	46.52807	65.23184	91.02428	126.49099
38	51.75616	73.17966	102.98743	144.33973
39	57.55934	82.08122	116.50580	164.68729
40	64.00087	92.05097	131.78155	187.88351

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .150	.200	.250	.300
1	.15000	.20000	.25000	.30000
2	.32250	.44000	.56250	.69000
3	.52087	.72800	.95313	1.19700
4	.74901	1.07360	1.44141	1.85610
5	1.01136	1.48832	2.05176	2.71293
6	1.31306	1.98598	2.81470	3.82681
7	1.66002	2.58318	3.76837	5.27485
8	2.05902	3.29982	4.96046	7.15731
9	2.51788	4.15978	6.45058	9.60450
10	3.04556	5.19174	8.31323	12.78585
11	3.65239	6.43008	10.64153	16.92160
12	4.35025	7.91610	13.55192	22.29809
13	5.15279	9.69932	17.18989	29.28751
14	6.07571	11.83918	21.73737	38.37376
15	7.13706	14.40702	27.42171	50.18589
16	8.35762	17.48843	34.52714	65.54166
17	9.76126	21.18611	43.40892	85.50416
18	11.37545	25.62333	54.51115	111.45541
19	13.23177	30.94800	68.38894	145.19203
20	15.36654	37.33760	85.73617	189.04964
21	17.82152	45.00512	107.42022	246.06453
22	20.64475	54.20614	134.52527	320.18389
23	23.89146	65.24737	168.40659	416.53905
24	27.62518	78.49685	210.75824	541.80077
25	31.91895	94.39622	263.69780	704.64100
26	36.85680	113.47546	329.87225	916.33330
27	42.53531	136.37055	412.59031	1191.53329
28	49.06561	163.84466	515.98788	1549.29328
29	56.57545	196.81359	645.23485	2014.38126
30	65.21177	236.37631	806.79357	2618.99564
31	75.14354	283.85158	1008.74196	3404.99434
32	86.56507	340.82189	1261.17745	4426.79264
33	99.69983	409.18627	1576.72181	5755.13043
34	114.80480	491.22352	1971.15226	7481.96956
35	132.17552	589.66823	2464.19033	9726.86043
36	152.15185	707.80187	3080.48791	12645.21855
37	175.12463	849.56225	3850.85989	16439.08412
38	201.54332	1019.67470	4813.82486	21371.10935
39	231.92482	1223.80964	6017.53108	27782.74216
40	266.86355	1468.77157	7522.16385	36117.86481

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
5	.02525	.05101	.07728	.10408
10	.05114	.10462	.16054	.21899
15	.07768	.16097	.25023	.34587
20	.10490	.22019	.34686	.48595
25	.13280	.28243	.45095	.64061
30	.16140	.34785	.56308	.81136
35	.19073	.41660	.68388	.99989
40	.22079	.48886	.81402	1.20804
45	.25162	.56481	.95421	1.43785
50	.28323	.64463	1.10524	1.69159
55	.31563	.72852	1.26794	1.97173
60	.34885	.81670	1.44322	2.28103
65	.38291	.90937	1.63204	2.62252
70	.41783	1.00676	1.83546	2.99956
75	.45363	1.10913	2.05459	3.41584
80	.49034	1.21672	2.29066	3.87544
85	.52797	1.32979	2.54498	4.38288
90	.56655	1.44863	2.81895	4.94313
95	.60611	1.57354	3.11409	5.56170
100	.64667	1.70481	3.43205	6.24465
105	.68825	1.84279	3.77457	6.99867
110	.73088	1.98780	4.14357	7.83118
115	.77459	2.14020	4.54109	8.75034
120	.81940	2.30039	4.96932	9.76516
125	.86534	2.46874	5.43066	10.88561
130	.91244	2.64568	5.92764	12.12267
135	.96073	2.83165	6.46304	13.48849
140	1.01024	3.02710	7.03981	14.99647
145	1.06100	3.23252	7.66116	16.66139
150	1.11305	3.44842	8.33053	18.49960
155	1.16640	3.67534	9.05163	20.52914
160	1.22111	3.91383	9.82846	22.76991

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .025	.030	.035	.040
5	.13141	.15927	.18769	.21665
10	.28008	.34392	.41060	.48024
15	.44830	.55797	.67535	.80094
20	.63862	.80611	.98979	1.19112
25	.85394	1.09378	1.36324	1.66584
30	1.09757	1.42726	1.80679	2.24340
35	1.37321	1.81386	2.33359	2.94609
40	1.68506	2.26204	2.95926	3.80102
45	2.03790	2.78160	3.70236	4.84118
50	2.43711	3.38391	4.58493	6.10668
55	2.88877	4.08215	5.63314	7.64637
60	3.39979	4.89160	6.87809	9.51963
65	3.97796	5.82998	8.35670	11.79874
70	4.63210	6.91782	10.11283	14.57162
75	5.37221	8.17893	12.19855	17.94525
80	6.20957	9.64089	14.67574	22.04980
85	7.15696	11.33571	17.61786	27.04360
90	8.22886	13.30047	21.11218	33.11933
95	9.44160	15.57816	25.26233	40.51139
100	10.81372	18.21863	30.19141	49.50495
105	12.36614	21.27966	36.04561	60.44699
110	14.12256	24.82823	42.99856	73.75966
115	16.10978	28.94200	51.25649	89.95656
120	18.35815	33.71099	61.06432	109.66256
125	20.90197	39.23955	72.71294	133.63793
130	23.78007	45.64866	86.54785	162.80762
135	27.03637	53.07859	102.97938	198.29702
140	30.72058	61.69190	122.49489	241.47530
145	34.88893	71.67710	145.67318	294.00828
150	39.60503	83.25268	173.20173	357.92267
155	44.94086	96.67194	205.89701	435.68431
160	50.97787	112.22855	244.72875	530.29324

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TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .045	.050	.055	.060
5	.24618	.27628	.30696	.33823
10	.55297	.62889	.70814	.79085
15	.93528	1.07893	1.23248	1.39656
20	1.41171	1.65330	1.91776	2.20714
25	2.00543	2.38635	2.81339	3.29187
30	2.74532	3.32194	3.98395	4.74349
35	3.66735	4.51602	5.51383	6.68609
40	4.81636	6.03999	7.51331	9.28572
45	6.24825	7.98501	10.12655	12.76461
50	8.03264	10.46740	13.54196	17.42015
55	10.25631	13.63563	18.00576	23.65032
60	13.02741	17.67919	23.83977	31.98769
65	16.48070	22.83990	31.46459	43.14497
70	20.78414	29.42643	41.42992	58.07593
75	26.14700	37.83269	54.45420	78.05692
80	32.83010	48.56144	71.47643	104.79599
85	41.15846	62.25435	93.72379	140.57890
90	51.53711	79.73037	122.80021	188.46451
95	64.47079	102.03468	160.80192	252.54625
100	80.58852	130.50126	210.46864	338.30208
105	100.67414	166.83263	275.38105	453.06273
110	125.70447	213.20169	360.21898	606.63835
115	156.89683	272.38167	471.09876	812.15719
120	195.76817	347.91199	616.01420	1087.18775
125	244.20894	444.30993	805.41288	1455.24068
130	304.57496	567.34086	1052.94938	1947.77852
135	379.80199	724.36296	1376.46969	2606.90526
140	473.54856	924.76737	1799.29779	3488.96553
145	590.37385	1180.53983	2351.91721	4669.36113
150	735.95941	1506.97750	3074.16870	6248.99672
155	917.38550	1923.60387	4018.12250	8362.90548
160	1143.47542	2455.33644	5251.83237	11191.79224

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	.40255	.46933	.53862	.61051
10	.96715	1.15892	1.36736	1.59374
15	1.75903	2.17217	2.64248	3.17725
20	2.86968	3.66096	4.60441	5.72750
25	4.42743	5.84848	7.62308	9.83471
30	6.61226	9.06266	12.26768	16.44940
35	9.67658	13.78534	19.41397	27.10244
40	13.97446	20.72452	30.40942	44.25926
45	20.00245	30.92045	47.32729	71.89048
50	28.45703	45.90161	73.35752	116.39085
55	40.31500	67.91386	113.40826	188.05914
60	56.94643	100.25706	175.03129	303.48164
65	80.27286	147.77985	269.84596	489.37073
70	112.98939	217.60641	415.73009	788.74696
75	158.87602	320.20453	640.19089	1270.89537
80	223.23439	470.95483	985.55167	2047.40021
85	313.50033	692.45649	1516.93203	3297.96903
90	440.10298	1017.91509	2334.52658	5312.02261
95	617.66975	1496.12055	3592.49715	8555.67605
100	866.71633	2198.76126	5528.04079	13779.61234
105	1216.01703	3231.17098	8506.11461	22192.81398
110	1705.92935	4748.11956	13088.25033	35742.35935
115	2393.05671	6977.01472	20138.43410	57564.03767
120	3356.78838	10251.99294	30986.01575	92708.06882
125	4708.47191	15064.01040	47676.36472	149307.88242
130	6604.27797	22134.44276	73356.53547	240462.44823
135	9263.24406	32523.22754	112868.66134	387267.78801
140	12992.58153	47787.76070	173662.96473	623699.25577
145	18223.17027	70216.36785	267202.53623	999999.99999
150	25559.34155	103171.35007	411124.76168	999999.99999
155	35848.70128	151593.03070	632566.94539	999999.99999
160	50280.06057	222740.36559	973283.19389	999999.99999

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .110	.120	.130	.140
5	.68506	.76234	.84244	.92541
10	1.83942	2.10585	2.39457	2.70722
15	3.78459	4.47357	5.25427	6.13794
20	7.06231	8.64629	10.52309	12.74349
25	12.58546	16.00006	20.23054	25.46192
30	21.89230	28.95992	38.11590	49.95016
35	37.57485	51.79962	71.06851	97.10018
40	64.00087	92.05097	131.78155	187.88351
45	108.53024	162.98760	243.64140	362.67907
50	183.56483	288.00219	449.73593	699.23299
55	310.00247	508.32061	829.45173	1347.23881
60	523.05724	896.59693	1529.05347	2594.91866
65	882.06693	1580.87249	2818.02434	4997.21964
70	1487.01913	2786.79983	5192.86962	9622.64498
75	2506.39877	4912.05584	9568.36811	18528.50639
80	4224.11275	8657.48310	17629.94045	35675.98181
85	7118.56070	15258.20568	32482.86494	68691.98103
90	11995.87381	26890.93422	59848.41552	132261.46738
95	20214.43005	47391.77662	110267.66861	254659.08340
100	34063.17527	83521.26573	203161.87423	490325.23813
105	57399.11633	147193.77037	374313.42661	944080.28902
110	96721.53413	259406.47936	689649.06770	999999.99999
115	162982.09492	457163.61382	999999.99999	999999.99999
120	274634.99325	805679.25501	999999.99999	999999.99999
125	462776.62010	999999.99999	999999.99999	999999.99999
130	779806.20275	999999.99999	999999.99999	999999.99999
135	999999.99999	999999.99999	999999.99999	999999.99999
140	999999.99999	999999.99999	999999.99999	999999.99999
145	999999.99999	999999.99999	999999.99999	999999.99999
150	999999.99999	999999.99999	999999.99999	999999.99999
155	999999.99999	999999.99999	999999.99999	999999.99999
160	999999.99999	999999.99999	999999.99999	999999.99999

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 7. INVESTMENT INCREASE MULTIPLIER
THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .150	.200	.250	.300
5	1.01136	1.48832	2.05176	2.71293
10	3.04556	5.19174	8.31323	12.78585
15	7.13706	14.40702	27.42171	50.18589
20	15.36654	37.33760	85.73617	189.04964
25	31.91895	94.39622	263.69780	704.64100
30	65.21177	236.37631	806.79357	2618.99564
35	132.17552	589.66823	2464.19033	9726.86043
40	266.86355	1468.77157	7522.16385	36117.86481
45	537.76927	3656.26199	22957.87404	134105.81671
50	1082.65744	9099.43815	70063.92322	497928.22298
55	2178.62218	22643.80226	213820.17681	999999.99999
60	4382.99875	56346.51435	652529.44680	999999.99999
65	8816.78739	140209.64692	999999.99999	999999.99999
70	17734.72004	348887.95693	999999.99999	999999.99999
75	35671.86798	868146.36931	999999.99999	999999.99999
80	71749.87940	999999.99999	999999.99999	999999.99999
85	144315.64699	999999.99999	999999.99999	999999.99999
90	290271.32521	999999.99999	999999.99999	999999.99999
95	583840.32764	999999.99999	999999.99999	999999.99999
100	999999.99999	999999.99999	999999.99999	999999.99999
105	999999.99999	999999.99999	999999.99999	999999.99999
110	999999.99999	999999.99999	999999.99999	999999.99999
115	999999.99999	999999.99999	999999.99999	999999.99999
120	999999.99999	999999.99999	999999.99999	999999.99999
125	999999.99999	999999.99999	999999.99999	999999.99999
130	999999.99999	999999.99999	999999.99999	999999.99999
135	999999.99999	999999.99999	999999.99999	999999.99999
140	999999.99999	999999.99999	999999.99999	999999.99999
145	999999.99999	999999.99999	999999.99999	999999.99999
150	999999.99999	999999.99999	999999.99999	999999.99999
155	999999.99999	999999.99999	999999.99999	999999.99999
160	999999.99999	999999.99999	999999.99999	999999.99999

Table 8.--Discounted Investment Increase Multiplier

The present value of the increase in value of \$1 invested for n years.

$$\frac{(1+i)^n - 1}{(1+i)^n}$$

This multiplier is used to find the present value of a future increase in value (V'_o), such as compounded investment earnings or interest rate charges, of an initial investment (V_o) compounded for n years at interest rate i.

To find the present value of this future increase in value, multiply the initial investment by the multiplier for the desired interest rate i and years n:

$$V'_o = V_o \left[\frac{(1+i)^n - 1}{(1+i)^n} \right]$$

Example: Find the present value of the cost of using land for one 40-year rotation, where at the end of the rotation the land is valued at its original purchase price, \$10. The interest rate is 4 percent.

Land value: V_o = \$10 per acre

Interest rate: $i = .04$

Years: $n = 40$

Multiplier: = 0.79171 (page 104)

Present value of land costs for one rotation: V'_o = \$10 (0.7917) = \$7.92 per acre

Notes

TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	.00498	.00990	.01478	.01961
2	.00993	.01970	.02934	.03883
3	.01485	.02941	.04368	.05768
4	.01975	.03902	.05782	.07615
5	.02463	.04853	.07174	.09427
6	.02948	.05795	.08546	.11203
7	.03431	.06728	.09897	.12944
8	.03911	.07652	.11229	.14651
9	.04390	.08566	.12541	.16324
10	.04865	.09471	.13833	.17965
11	.05339	.10368	.15107	.19574
12	.05809	.11255	.16361	.21151
13	.06278	.12134	.17597	.22697
14	.06744	.13004	.18815	.24212
15	.07208	.13865	.20015	.25699
16	.07670	.14718	.21197	.27155
17	.08129	.15562	.22361	.28584
18	.08586	.16398	.23509	.29984
19	.09041	.17226	.24639	.31357
20	.09494	.18046	.25753	.32703
21	.09944	.18857	.26850	.34022
22	.10392	.19660	.27931	.35316
23	.10838	.20456	.28996	.36584
24	.11281	.21243	.30046	.37828
25	.11723	.22023	.31079	.39047
26	.12162	.22795	.32098	.40242
27	.12599	.23560	.33101	.41414
28	.13034	.24316	.34090	.42563
29	.13467	.25066	.35064	.43689
30	.13897	.25808	.36024	.44793
31	.14325	.26542	.36969	.45875
32	.14752	.27270	.37901	.46937
33	.15176	.27990	.38818	.47977
34	.15598	.28703	.39723	.48997
35	.16018	.29409	.40613	.49997
36	.16436	.30108	.41491	.50978
37	.16851	.30800	.42356	.51939
38	.17265	.31485	.43208	.52881
39	.17677	.32163	.44047	.53805
40	.18086	.32835	.44874	.54711

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE
DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .025	.030	.035	.040
1	.02439	.02913	.03382	.03846
2	.04819	.05740	.06649	.07544
3	.07140	.08486	.09806	.11100
4	.09405	.11151	.12856	.14520
5	.11615	.13739	.15803	.17807
6	.13770	.16252	.18650	.20969
7	.15873	.18691	.21401	.24008
8	.17925	.21059	.24059	.26931
9	.19927	.23358	.26627	.29741
10	.21880	.25591	.29108	.32444
11	.23786	.27758	.31505	.35042
12	.25644	.29862	.33822	.37540
13	.27458	.31905	.36060	.39943
14	.29227	.33888	.38222	.42252
15	.30953	.35814	.40311	.44474
16	.32638	.37683	.42329	.46609
17	.34280	.39498	.44280	.48663
18	.35883	.41261	.46164	.50637
19	.37447	.42971	.47984	.52536
20	.38973	.44632	.49743	.54361
21	.40461	.46245	.51443	.56117
22	.41914	.47811	.53085	.57804
23	.43330	.49331	.54671	.59427
24	.44712	.50807	.56204	.60988
25	.46061	.52239	.57685	.62488
26	.47377	.53631	.59116	.63931
27	.48660	.54981	.60499	.65318
28	.49912	.56292	.61835	.66652
29	.51134	.57565	.63125	.67935
30	.52326	.58801	.64372	.69168
31	.53489	.60001	.65577	.70354
32	.54623	.61166	.66741	.71494
33	.55730	.62297	.67866	.72591
34	.56809	.63396	.68952	.73645
35	.57863	.64462	.70002	.74658
36	.58891	.65497	.71017	.75633
37	.59893	.66502	.71997	.76570
38	.60872	.67477	.72944	.77471
39	.61826	.68425	.73859	.78338
40	.62757	.69344	.74743	.79171

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE
DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .045	.050	.055	.060
1	.04306	.04762	.05213	.05660
2	.08427	.09297	.10155	.11000
3	.12370	.13616	.14839	.16038
4	.16144	.17730	.19278	.20791
5	.19755	.21647	.23487	.25274
6	.23210	.25378	.27475	.29504
7	.26517	.28932	.31256	.33494
8	.29681	.32316	.34840	.37259
9	.32710	.35539	.38237	.40810
10	.35607	.38609	.41457	.44161
11	.38380	.41532	.44509	.47321
12	.41034	.44316	.47402	.50303
13	.43573	.46968	.50144	.53116
14	.46003	.49493	.52743	.55770
15	.48328	.51898	.55207	.58273
16	.50553	.54189	.57542	.60635
17	.52682	.56370	.59755	.62864
18	.54720	.58448	.61853	.64966
19	.56670	.60427	.63842	.66949
20	.58536	.62311	.65727	.68820
21	.60321	.64106	.67514	.70584
22	.62030	.65815	.69207	.72249
23	.63665	.67443	.70813	.73820
24	.65230	.68993	.72334	.75302
25	.66727	.70470	.73777	.76700
26	.68160	.71876	.75144	.78019
27	.69531	.73215	.76440	.79263
28	.70843	.74491	.77668	.80437
29	.72098	.75705	.78832	.81544
30	.73300	.76862	.79936	.82589
31	.74450	.77964	.80982	.83575
32	.75550	.79013	.81973	.84504
33	.76603	.80013	.82913	.85381
34	.77610	.80965	.83804	.86209
35	.78575	.81871	.84648	.86989
36	.79497	.82734	.85448	.87726
37	.80380	.83556	.86207	.88421
38	.81225	.84339	.86926	.89076
39	.82033	.85085	.87608	.89694
40	.82807	.85795	.88254	.90278

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE
DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .070	.080	.090	.100
1	.06542	.07407	.08257	.09091
2	.12656	.14266	.15832	.17355
3	.18370	.20617	.22782	.24869
4	.23710	.26497	.29157	.31699
5	.28701	.31942	.35007	.37908
6	.33366	.36983	.40373	.43553
7	.37725	.41651	.45297	.48684
8	.41799	.45973	.49813	.53349
9	.45607	.49975	.53957	.57590
10	.49165	.53681	.57759	.61446
11	.52491	.57112	.61247	.64951
12	.55599	.60289	.64447	.68137
13	.58504	.63230	.67382	.71034
14	.61218	.65954	.70075	.73667
15	.63755	.68476	.72546	.76061
16	.66127	.70811	.74813	.78237
17	.68343	.72973	.76893	.80216
18	.70414	.74975	.78801	.82014
19	.72349	.76829	.80551	.83649
20	.74158	.78545	.82157	.85136
21	.75849	.80134	.83630	.86487
22	.77429	.81606	.84982	.87715
23	.78905	.82968	.86222	.88832
24	.80285	.84230	.87360	.89847
25	.81575	.85398	.88403	.90770
26	.82780	.86480	.89361	.91609
27	.83907	.87481	.90239	.92372
28	.84960	.88409	.91045	.93066
29	.85944	.89267	.91785	.93696
30	.86863	.90062	.92463	.94269
31	.87723	.90798	.93085	.94790
32	.88526	.91480	.93656	.95264
33	.89277	.92111	.94180	.95694
34	.89978	.92695	.94661	.96086
35	.90634	.93237	.95101	.96442
36	.91246	.93738	.95506	.96765
37	.91819	.94201	.95877	.97059
38	.92354	.94631	.96217	.97327
39	.92854	.95029	.96530	.97570
40	.93322	.95397	.96816	.97791

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	.09910	.10714	.11504	.12281
2	.18838	.20281	.21685	.23053
3	.26881	.28822	.30695	.32503
4	.34127	.36448	.38668	.40792
5	.40655	.43257	.45724	.48063
6	.46536	.49337	.51968	.54441
7	.51834	.54765	.57494	.60036
8	.56607	.59612	.62384	.64944
9	.60908	.63939	.66712	.69249
10	.64782	.67803	.70541	.73026
11	.68272	.71252	.73930	.76338
12	.71416	.74332	.76929	.79244
13	.74249	.77083	.79584	.81793
14	.76801	.79538	.81932	.84029
15	.79100	.81730	.84011	.85990
16	.81171	.83688	.85850	.87711
17	.83037	.85436	.87478	.89220
18	.84718	.86996	.88919	.90544
19	.86232	.88389	.90194	.91705
20	.87597	.89633	.91322	.92724
21	.88826	.90744	.92320	.93617
22	.89933	.91736	.93204	.94401
23	.90931	.92621	.93986	.95089
24	.91830	.93412	.94677	.95692
25	.92639	.94118	.95290	.96221
26	.93369	.94748	.95832	.96685
27	.94026	.95311	.96311	.97092
28	.94618	.95813	.96736	.97449
29	.95151	.96262	.97111	.97763
30	.95632	.96662	.97443	.98037
31	.96065	.97020	.97738	.98278
32	.96455	.97339	.97998	.98490
33	.96806	.97624	.98228	.98675
34	.97122	.97879	.98432	.98838
35	.97408	.98106	.98612	.98981
36	.97665	.98309	.98772	.99106
37	.97896	.98490	.98913	.99216
38	.98104	.98652	.99038	.99312
39	.98292	.98796	.99149	.99396
40	.98462	.98925	.99247	.99471

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE
DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	.13043	.16667	.20000	.23077
2	.24386	.30556	.36000	.40828
3	.34248	.42130	.48800	.54483
4	.42825	.51775	.59040	.64987
5	.50282	.59812	.67232	.73067
6	.56767	.66510	.73786	.79282
7	.62406	.72092	.79028	.84063
8	.67310	.76743	.83223	.87741
9	.71574	.80619	.86578	.90570
10	.75282	.83849	.89263	.92746
11	.78506	.86541	.91410	.94420
12	.81309	.88784	.93128	.95708
13	.83747	.90654	.94502	.96698
14	.85867	.92211	.95602	.97460
15	.87711	.93509	.96482	.98046
16	.89314	.94591	.97185	.98497
17	.90707	.95493	.97748	.98844
18	.91919	.96244	.98199	.99111
19	.92973	.96870	.98559	.99316
20	.93890	.97392	.98847	.99474
21	.94687	.97826	.99078	.99595
22	.95380	.98189	.99262	.99689
23	.95983	.98491	.99410	.99761
24	.96507	.98742	.99528	.99816
25	.96962	.98952	.99622	.99858
26	.97358	.99126	.99698	.99891
27	.97703	.99272	.99758	.99916
28	.98003	.99393	.99807	.99935
29	.98263	.99494	.99845	.99950
30	.98490	.99579	.99876	.99962
31	.98687	.99649	.99901	.99971
32	.98858	.99707	.99921	.99977
33	.99007	.99756	.99937	.99983
34	.99136	.99797	.99949	.99987
35	.99249	.99831	.99959	.99990
36	.99347	.99859	.99968	.99992
37	.99432	.99882	.99974	.99994
38	.99506	.99902	.99979	.99995
39	.99571	.99918	.99983	.99996
40	.99627	.99932	.99987	.99997

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .005	.010	.015	.020
5	.02463	.04853	.07174	.09427
10	.04865	.09471	.13833	.17965
15	.07208	.13865	.20015	.25699
20	.09494	.18046	.25753	.32703
25	.11723	.22023	.31079	.39047
30	.13897	.25808	.36024	.44793
35	.16018	.29409	.40613	.49997
40	.18086	.32835	.44874	.54711
45	.20104	.36095	.48829	.58980
50	.22071	.39196	.52500	.62847
55	.23991	.42147	.55907	.66350
60	.25863	.44955	.59070	.69522
65	.27689	.47627	.62007	.72395
70	.29470	.50169	.64732	.74997
75	.31207	.52587	.67262	.77354
80	.32901	.54888	.69611	.79489
85	.34554	.57078	.71791	.81423
90	.36166	.59161	.73815	.83174
95	.37738	.61143	.75693	.84760
100	.39271	.63029	.77437	.86197
105	.40767	.64823	.79056	.87498
110	.42226	.66531	.80558	.88676
115	.43649	.68155	.81953	.89744
120	.45037	.69701	.83248	.90711
125	.46390	.71171	.84449	.91586
130	.47711	.72570	.85565	.92380
135	.48999	.73902	.86601	.93098
140	.50255	.75168	.87562	.93749
145	.51480	.76373	.88454	.94338
150	.52675	.77520	.89282	.94872
155	.53841	.78611	.90051	.95355
160	.54977	.79649	.90765	.95793

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	.11615	.13739	.15803	.17807
10	.21880	.25591	.29108	.32444
15	.30953	.35814	.40311	.44474
20	.38973	.44632	.49743	.54361
25	.46061	.52239	.57685	.62488
30	.52326	.58801	.64372	.69168
35	.57863	.64462	.70002	.74658
40	.62757	.69344	.74743	.79171
45	.67083	.73556	.78734	.82880
50	.70906	.77189	.82095	.85929
55	.74285	.80323	.84924	.88434
60	.77272	.83027	.87307	.90494
65	.79911	.85359	.89312	.92187
70	.82245	.87370	.91001	.93578
75	.84307	.89105	.92423	.94722
80	.86130	.90602	.93621	.95662
85	.87741	.91893	.94629	.96434
90	.89164	.93007	.95478	.97069
95	.90423	.93968	.96192	.97591
100	.91535	.94797	.96794	.98020
105	.92518	.95512	.97301	.98373
110	.93387	.96128	.97727	.98662
115	.94155	.96660	.98086	.98901
120	.94834	.97119	.98389	.99096
125	.95434	.97515	.98643	.99257
130	.95964	.97856	.98858	.99390
135	.96433	.98151	.99038	.99498
140	.96847	.98405	.99190	.99588
145	.97214	.98624	.99318	.99661
150	.97537	.98813	.99426	.99721
155	.97823	.98976	.99517	.99771
160	.98076	.99117	.99593	.99812

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
5	.19755	.21647	.23487	.25274
10	.35607	.38609	.41457	.44161
15	.48328	.51898	.55207	.58273
20	.58536	.62311	.65727	.68820
25	.66727	.70470	.73777	.76700
30	.73300	.76862	.79936	.82589
35	.78575	.81871	.84648	.86989
40	.82807	.85795	.88254	.90278
45	.86204	.88870	.91012	.92735
50	.88929	.91280	.93123	.94571
55	.91116	.93167	.94738	.95943
60	.92871	.94646	.95974	.96969
65	.94279	.95805	.96920	.97735
70	.95410	.96713	.97643	.98307
75	.96316	.97425	.98197	.98735
80	.97044	.97982	.98620	.99055
85	.97628	.98419	.98944	.99294
90	.98097	.98761	.99192	.99472
95	.98473	.99029	.99382	.99606
100	.98774	.99240	.99527	.99705
105	.99016	.99404	.99638	.99780
110	.99211	.99533	.99723	.99835
115	.99367	.99634	.99788	.99877
120	.99492	.99713	.99838	.99908
125	.99592	.99775	.99876	.99931
130	.99673	.99824	.99905	.99949
135	.99737	.99862	.99927	.99962
140	.99789	.99892	.99944	.99971
145	.99831	.99915	.99957	.99979
150	.99864	.99934	.99967	.99984
155	.99891	.99948	.99975	.99988
160	.99913	.99959	.99981	.99991

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE
DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	.28701	.31942	.35007	.37908
10	.49165	.53681	.57759	.61446
15	.63755	.68476	.72546	.76061
20	.74158	.78545	.82157	.85136
25	.81575	.85398	.88403	.90770
30	.86863	.90062	.92463	.94269
35	.90634	.93237	.95101	.96442
40	.93322	.95397	.96816	.97791
45	.95239	.96867	.97931	.98628
50	.96605	.97868	.98655	.99148
55	.97580	.98549	.99126	.99471
60	.98274	.99012	.99432	.99672
65	.98770	.99328	.99631	.99796
70	.99123	.99543	.99760	.99873
75	.99375	.99689	.99844	.99921
80	.99554	.99788	.99899	.99951
85	.99682	.99856	.99934	.99970
90	.99773	.99902	.99957	.99981
95	.99838	.99933	.99972	.99988
100	.99885	.99955	.99982	.99993
105	.99918	.99969	.99988	.99995
110	.99941	.99979	.99992	.99997
115	.99958	.99986	.99995	.99998
120	.99970	.99990	.99997	.99999
125	.99979	.99993	.99998	.99999
130	.99985	.99995	.99999	1.00000
135	.99989	.99997	.99999	1.00000
140	.99992	.99998	.99999	1.00000
145	.99995	.99999	1.00000	1.00000
150	.99996	.99999	1.00000	1.00000
155	.99997	.99999	1.00000	1.00000
160	.99998	1.00000	1.00000	1.00000

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TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

YEARS	RATE OF INTEREST .110	.120	.130	.140
5	.40655	.43257	.45724	.48063
10	.64782	.67803	.70541	.73026
15	.79100	.81730	.84011	.85990
20	.87597	.89633	.91322	.92724
25	.92639	.94118	.95290	.96221
30	.95632	.96662	.97443	.98037
35	.97408	.98106	.98612	.98981
40	.98462	.98925	.99247	.99471
45	.99087	.99390	.99591	.99725
50	.99458	.99654	.99778	.99857
55	.99678	.99804	.99880	.99926
60	.99809	.99889	.99935	.99961
65	.99887	.99937	.99965	.99980
70	.99933	.99964	.99981	.99990
75	.99960	.99980	.99990	.99995
80	.99976	.99988	.99994	.99997
85	.99986	.99993	.99997	.99999
90	.99992	.99996	.99998	.99999
95	.99995	.99998	.99999	1.00000
100	.99997	.99999	1.00000	1.00000
105	.99998	.99999	1.00000	1.00000
110	.99999	1.00000	1.00000	1.00000
115	.99999	1.00000	1.00000	1.00000
120	1.00000	1.00000	1.00000	1.00000
125	1.00000	1.00000	1.00000	1.00000
130	1.00000	1.00000	1.00000	1.00000
135	1.00000	1.00000	1.00000	1.00000
140	1.00000	1.00000	1.00000	1.00000
145	1.00000	1.00000	1.00000	1.00000
150	1.00000	1.00000	1.00000	1.00000
155	1.00000	1.00000	1.00000	1.00000
160	1.00000	1.00000	1.00000	1.00000

TABLE 8. DISCOUNTED INVESTMENT INCREASE MULTIPLIER
THE PRESENT VALUE OF THE INCREASE IN VALUE OF ONE DOLLAR INVESTED FOR N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
5	.50282	.59812	.67232	.73067
10	.75282	.83849	.89263	.92746
15	.87711	.93509	.96482	.98046
20	.93890	.97392	.98847	.99474
25	.96962	.98952	.99622	.99858
30	.98490	.99579	.99876	.99962
35	.99249	.99831	.99959	.99990
40	.99627	.99932	.99987	.99997
45	.99814	.99973	.99996	.99999
50	.99908	.99989	.99999	1.00000
55	.99954	.99996	1.00000	1.00000
60	.99977	.99998	1.00000	1.00000
65	.99989	.99999	1.00000	1.00000
70	.99994	1.00000	1.00000	1.00000
75	.99997	1.00000	1.00000	1.00000
80	.99999	1.00000	1.00000	1.00000
85	.99999	1.00000	1.00000	1.00000
90	1.00000	1.00000	1.00000	1.00000
95	1.00000	1.00000	1.00000	1.00000
100	1.00000	1.00000	1.00000	1.00000
105	1.00000	1.00000	1.00000	1.00000
110	1.00000	1.00000	1.00000	1.00000
115	1.00000	1.00000	1.00000	1.00000
120	1.00000	1.00000	1.00000	1.00000
125	1.00000	1.00000	1.00000	1.00000
130	1.00000	1.00000	1.00000	1.00000
135	1.00000	1.00000	1.00000	1.00000
140	1.00000	1.00000	1.00000	1.00000
145	1.00000	1.00000	1.00000	1.00000
150	1.00000	1.00000	1.00000	1.00000
155	1.00000	1.00000	1.00000	1.00000
160	1.00000	1.00000	1.00000	1.00000

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Table 9.--Capital Recovery Multiplier

The annual payment which will recover an original investment of \$1 plus interest in n years.

$$\frac{i(1+i)^n}{(1+i)^n - 1}$$

This multiplier is used to determine the annual payment (a) which in n years will amount to the original investment (V_o) plus interest at rate i.

To find the annual payment, multiply the original investment by the multiplier:

$$a = V_o \left[\frac{i(1+i)^n}{(1+i)^n - 1} \right]$$

Example: Determine how much should be charged annually for the use of equipment so as to recover the original purchase price of \$1,000 plus interest at 10 percent by the end of a 10-year period.

Original investment: V_o = \$1,000

Interest rate: i = .10

Years: n = 10

Multiplier: = 0.16275 (page 120)

Annual payment: a = \$1,000 (0.16275) = \$162.75 per year

Notes

TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	1.00500	1.01000	1.01500	1.02000
2	.50375	.50751	.51128	.51505
3	.33667	.34002	.34338	.34675
4	.25313	.25628	.25944	.26262
5	.20301	.20604	.20909	.21216
6	.16960	.17255	.17553	.17853
7	.14573	.14863	.15156	.15451
8	.12783	.13069	.13358	.13651
9	.11391	.11674	.11961	.12252
10	.10277	.10558	.10843	.11133
11	.09366	.09645	.09929	.10218
12	.08607	.08885	.09168	.09456
13	.07964	.08241	.08524	.08812
14	.07414	.07690	.07972	.08260
15	.06936	.07212	.07494	.07783
16	.06519	.06794	.07077	.07365
17	.06151	.06426	.06708	.06997
18	.05823	.06098	.06381	.06670
19	.05530	.05805	.06088	.06378
20	.05267	.05542	.05825	.06116
21	.05028	.05303	.05587	.05878
22	.04811	.05086	.05370	.05663
23	.04613	.04889	.05173	.05467
24	.04432	.04707	.04992	.05287
25	.04265	.04541	.04826	.05122
26	.04111	.04387	.04673	.04970
27	.03969	.04245	.04532	.04829
28	.03836	.04112	.04400	.04699
29	.03713	.03990	.04278	.04578
30	.03598	.03875	.04164	.04465
31	.03490	.03768	.04057	.04360
32	.03389	.03667	.03958	.04261
33	.03295	.03573	.03864	.04169
34	.03206	.03484	.03776	.04082
35	.03122	.03400	.03693	.04000
36	.03042	.03321	.03615	.03923
37	.02967	.03247	.03541	.03851
38	.02896	.03176	.03472	.03782
39	.02829	.03109	.03405	.03717
40	.02765	.03046	.03343	.03656

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
1	1.02500	1.03000	1.03500	1.04000
2	.51883	.52261	.52640	.53020
3	.35014	.35353	.35693	.36035
4	.26582	.26903	.27225	.27549
5	.21525	.21835	.22148	.22463
6	.18155	.18460	.18767	.19076
7	.15750	.16051	.16354	.16661
8	.13947	.14246	.14548	.14853
9	.12546	.12843	.13145	.13449
10	.11426	.11723	.12024	.12329
11	.10511	.10808	.11109	.11415
12	.09749	.10046	.10348	.10655
13	.09105	.09403	.09706	.10014
14	.08554	.08853	.09157	.09467
15	.08077	.08377	.08683	.08994
16	.07660	.07961	.08268	.08582
17	.07293	.07595	.07904	.08220
18	.06967	.07271	.07582	.07899
19	.06676	.06981	.07294	.07614
20	.06415	.06722	.07036	.07358
21	.06179	.06487	.06804	.07128
22	.05965	.06275	.06593	.06920
23	.05770	.06081	.06402	.06731
24	.05591	.05905	.06227	.06559
25	.05428	.05743	.06067	.06401
26	.05277	.05594	.05921	.06257
27	.05138	.05456	.05785	.06124
28	.05009	.05329	.05660	.06001
29	.04889	.05211	.05545	.05888
30	.04778	.05102	.05437	.05783
31	.04674	.05000	.05337	.05686
32	.04577	.04905	.05244	.05595
33	.04486	.04816	.05157	.05510
34	.04401	.04732	.05076	.05431
35	.04321	.04654	.05000	.05358
36	.04245	.04580	.04928	.05289
37	.04174	.04511	.04861	.05224
38	.04107	.04446	.04798	.05163
39	.04044	.04384	.04739	.05106
40	.03984	.04326	.04683	.05052

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

YEARS	RATE OF INTEREST .045	.050	.055	.060
1	1.04500	1.05000	1.05500	1.06000
2	.53400	.53780	.54162	.54544
3	.36377	.36721	.37065	.37411
4	.27874	.28201	.28529	.28859
5	.22779	.23097	.23418	.23740
6	.19388	.19702	.20018	.20336
7	.16970	.17282	.17596	.17914
8	.15161	.15472	.15786	.16104
9	.13757	.14069	.14384	.14702
10	.12638	.12950	.13267	.13587
11	.11725	.12039	.12357	.12679
12	.10967	.11283	.11603	.11928
13	.10328	.10646	.10968	.11296
14	.09782	.10102	.10428	.10758
15	.09311	.09634	.09963	.10296
16	.08902	.09227	.09558	.09895
17	.08542	.08870	.09204	.09544
18	.08224	.08555	.08892	.09236
19	.07941	.08275	.08615	.08962
20	.07688	.08024	.08368	.08718
21	.07460	.07800	.08146	.08500
22	.07255	.07597	.07947	.08305
23	.07068	.07414	.07767	.08128
24	.06899	.07247	.07604	.07968
25	.06744	.07095	.07455	.07823
26	.06602	.06956	.07319	.07690
27	.06472	.06829	.07195	.07570
28	.06352	.06712	.07081	.07459
29	.06241	.06605	.06977	.07358
30	.06139	.06505	.06881	.07265
31	.06044	.06413	.06792	.07179
32	.05956	.06328	.06710	.07100
33	.05874	.06249	.06633	.07027
34	.05798	.06176	.06563	.06960
35	.05727	.06107	.06497	.06897
36	.05661	.06043	.06437	.06839
37	.05598	.05984	.06380	.06786
38	.05540	.05928	.06327	.06736
39	.05486	.05876	.06278	.06689
40	.05434	.05828	.06232	.06646

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
1	1.07000	1.08000	1.09000	1.10000
2	.55309	.56077	.56847	.57619
3	.38105	.38803	.39505	.40211
4	.29523	.30192	.30867	.31547
5	.24389	.25046	.25709	.26380
6	.20980	.21632	.22292	.22961
7	.18555	.19207	.19869	.20541
8	.16747	.17401	.18067	.18744
9	.15349	.16008	.16680	.17364
10	.14238	.14903	.15582	.16275
11	.13336	.14008	.14695	.15396
12	.12590	.13270	.13965	.14676
13	.11965	.12652	.13357	.14078
14	.11434	.12130	.12843	.13575
15	.10979	.11683	.12406	.13147
16	.10586	.11298	.12030	.12782
17	.10243	.10963	.11705	.12466
18	.09941	.10670	.11421	.12193
19	.09675	.10413	.11173	.11955
20	.09439	.10185	.10955	.11746
21	.09229	.09983	.10762	.11562
22	.09041	.09803	.10590	.11401
23	.08871	.09642	.10438	.11257
24	.08719	.09498	.10302	.11130
25	.08581	.09368	.10181	.11017
26	.08456	.09251	.10072	.10916
27	.08343	.09145	.09973	.10826
28	.08239	.09049	.09885	.10745
29	.08145	.08962	.09806	.10673
30	.08059	.08883	.09734	.10608
31	.07980	.08811	.09669	.10550
32	.07907	.08745	.09610	.10497
33	.07841	.08685	.09556	.10450
34	.07780	.08630	.09508	.10407
35	.07723	.08580	.09464	.10369
36	.07672	.08534	.09424	.10334
37	.07624	.08492	.09387	.10303
38	.07580	.08454	.09354	.10275
39	.07539	.08419	.09324	.10249
40	.07501	.08386	.09296	.10226

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

YEARS	RATE OF INTEREST .110	.120	.130	.140
1	1.11000	1.12000	1.13000	1.14000
2	.58393	.59170	.59948	.60729
3	.40921	.41635	.42352	.43073
4	.32233	.32923	.33619	.34320
5	.27057	.27741	.28431	.29128
6	.23638	.24323	.25015	.25716
7	.21222	.21912	.22611	.23319
8	.19432	.20130	.20839	.21557
9	.18060	.18768	.19487	.20217
10	.16980	.17698	.18429	.19171
11	.16112	.16842	.17584	.18339
12	.15403	.16144	.16899	.17667
13	.14815	.15568	.16335	.17116
14	.14323	.15087	.15867	.16661
15	.13907	.14682	.15474	.16281
16	.13552	.14339	.15143	.15962
17	.13247	.14046	.14861	.15692
18	.12984	.13794	.14620	.15462
19	.12756	.13576	.14413	.15266
20	.12558	.13388	.14235	.15099
21	.12384	.13224	.14081	.14954
22	.12231	.13081	.13948	.14830
23	.12097	.12956	.13832	.14723
24	.11979	.12846	.13731	.14630
25	.11874	.12750	.13643	.14550
26	.11781	.12665	.13565	.14480
27	.11699	.12590	.13498	.14419
28	.11626	.12524	.13439	.14366
29	.11561	.12466	.13387	.14320
30	.11502	.12414	.13341	.14280
31	.11451	.12369	.13301	.14245
32	.11404	.12328	.13266	.14215
33	.11363	.12292	.13234	.14188
34	.11326	.12260	.13207	.14165
35	.11293	.12232	.13183	.14144
36	.11263	.12206	.13162	.14126
37	.11236	.12184	.13143	.14111
38	.11213	.12164	.13126	.14097
39	.11191	.12146	.13112	.14085
40	.11172	.12130	.13099	.14075

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	1.15000	1.20000	1.25000	1.30000
2	.61512	.65455	.69444	.73478
3	.43798	.47473	.51230	.55063
4	.35027	.38629	.42344	.46163
5	.29832	.33438	.37185	.41058
6	.26424	.30071	.33882	.37839
7	.24036	.27742	.31634	.35687
8	.22285	.26061	.30040	.34192
9	.20957	.24808	.28876	.33124
10	.19925	.23852	.28007	.32346
11	.19107	.23110	.27349	.31773
12	.18448	.22526	.26845	.31345
13	.17911	.22062	.26454	.31024
14	.17469	.21689	.26150	.30782
15	.17102	.21388	.25912	.30598
16	.16795	.21144	.25724	.30458
17	.16537	.20944	.25576	.30351
18	.16319	.20781	.25459	.30269
19	.16134	.20646	.25366	.30207
20	.15976	.20536	.25292	.30159
21	.15842	.20444	.25233	.30122
22	.15727	.20369	.25186	.30094
23	.15628	.20307	.25148	.30072
24	.15543	.20255	.25119	.30055
25	.15470	.20212	.25095	.30043
26	.15407	.20176	.25076	.30033
27	.15353	.20147	.25061	.30025
28	.15306	.20122	.25048	.30019
29	.15265	.20102	.25039	.30015
30	.15230	.20085	.25031	.30011
31	.15200	.20070	.25025	.30009
32	.15173	.20059	.25020	.30007
33	.15150	.20049	.25016	.30005
34	.15131	.20041	.25013	.30004
35	.15113	.20034	.25010	.30003
36	.15099	.20028	.25008	.30002
37	.15086	.20024	.25006	.30002
38	.15074	.20020	.25005	.30001
39	.15065	.20016	.25004	.30001
40	.15056	.20014	.25003	.30001

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
5	.20301	.20604	.20909	.21216
10	.10277	.10558	.10843	.11133
15	.06936	.07212	.07494	.07783
20	.05267	.05542	.05825	.06116
25	.04265	.04541	.04826	.05122
30	.03598	.03875	.04164	.04465
35	.03122	.03400	.03693	.04000
40	.02765	.03046	.03343	.03656
45	.02487	.02771	.03072	.03391
50	.02265	.02551	.02857	.03182
55	.02084	.02373	.02683	.03014
60	.01933	.02224	.02539	.02877
65	.01806	.02100	.02419	.02763
70	.01697	.01993	.02317	.02667
75	.01602	.01902	.02230	.02586
80	.01520	.01822	.02155	.02516
85	.01447	.01752	.02089	.02456
90	.01383	.01690	.02032	.02405
95	.01325	.01636	.01982	.02360
100	.01273	.01587	.01937	.02320
105	.01226	.01543	.01897	.02286
110	.01184	.01503	.01862	.02255
115	.01146	.01467	.01830	.02229
120	.01110	.01435	.01802	.02205
125	.01078	.01405	.01776	.02184
130	.01048	.01378	.01753	.02165
135	.01020	.01353	.01732	.02148
140	.00995	.01330	.01713	.02133
145	.00971	.01309	.01696	.02120
150	.00949	.01290	.01680	.02108
155	.00929	.01272	.01666	.02097
160	.00909	.01256	.01653	.02088

TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	.21525	.21835	.22148	.22463
10	.11426	.11723	.12024	.12329
15	.08077	.08377	.08683	.08994
20	.06415	.06722	.07036	.07358
25	.05428	.05743	.06067	.06401
30	.04778	.05102	.05437	.05783
35	.04321	.04654	.05000	.05358
40	.03984	.04326	.04683	.05052
45	.03727	.04079	.04445	.04826
50	.03526	.03887	.04263	.04655
55	.03365	.03735	.04121	.04523
60	.03235	.03613	.04009	.04420
65	.03128	.03515	.03919	.04339
70	.03040	.03434	.03846	.04275
75	.02965	.03367	.03787	.04223
80	.02903	.03311	.03738	.04181
85	.02849	.03265	.03699	.04148
90	.02804	.03226	.03666	.04121
95	.02765	.03193	.03639	.04099
100	.02731	.03165	.03616	.04081
105	.02702	.03141	.03597	.04066
110	.02677	.03121	.03581	.04054
115	.02655	.03104	.03568	.04044
120	.02636	.03089	.03557	.04036
125	.02620	.03076	.03548	.04030
130	.02605	.03066	.03540	.04025
135	.02592	.03057	.03534	.04020
140	.02581	.03049	.03529	.04017
145	.02572	.03042	.03524	.04014
150	.02563	.03036	.03520	.04011
155	.02556	.03031	.03517	.04009
160	.02549	.03027	.03514	.04008

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
5	.22779	.23097	.23418	.23740
10	.12638	.12950	.13267	.13587
15	.09311	.09634	.09963	.10296
20	.07688	.08024	.08368	.08718
25	.06744	.07095	.07455	.07823
30	.06139	.06505	.06881	.07265
35	.05727	.06107	.06497	.06897
40	.05434	.05828	.06232	.06646
45	.05220	.05626	.06043	.06470
50	.05060	.05478	.05906	.06344
55	.04939	.05367	.05805	.06254
60	.04845	.05283	.05731	.06188
65	.04773	.05219	.05675	.06139
70	.04717	.05170	.05633	.06103
75	.04672	.05132	.05601	.06077
80	.04637	.05103	.05577	.06057
85	.04609	.05080	.05559	.06043
90	.04587	.05063	.05545	.06032
95	.04570	.05049	.05534	.06024
100	.04556	.05038	.05526	.06018
105	.04545	.05030	.05520	.06013
110	.04536	.05023	.05515	.06010
115	.04529	.05018	.05512	.06007
120	.04523	.05014	.05509	.06006
125	.04518	.05011	.05507	.06004
130	.04515	.05009	.05505	.06003
135	.04512	.05007	.05504	.06002
140	.04510	.05005	.05503	.06002
145	.04508	.05004	.05502	.06001
150	.04506	.05003	.05502	.06001
155	.04505	.05003	.05501	.06001
160	.04504	.05002	.05501	.06001

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	.24389	.25046	.25709	.26380
10	.14238	.14903	.15582	.16275
15	.10979	.11683	.12406	.13147
20	.09439	.10185	.10955	.11746
25	.08581	.09368	.10181	.11017
30	.08059	.08883	.09734	.10608
35	.07723	.08580	.09464	.10369
40	.07501	.08386	.09296	.10226
45	.07350	.08259	.09190	.10139
50	.07246	.08174	.09123	.10086
55	.07174	.08118	.09079	.10053
60	.07123	.08080	.09051	.10033
65	.07087	.08054	.09033	.10020
70	.07062	.08037	.09022	.10013
75	.07044	.08025	.09014	.10008
80	.07031	.08017	.09009	.10005
85	.07022	.08012	.09006	.10003
90	.07016	.08008	.09004	.10002
95	.07011	.08005	.09003	.10001
100	.07008	.08004	.09002	.10001
105	.07006	.08002	.09001	.10000
110	.07004	.08002	.09001	.10000
115	.07003	.08001	.09000	.10000
120	.07002	.08001	.09000	.10000
125	.07001	.08001	.09000	.10000
130	.07001	.08000	.09000	.10000
135	.07001	.08000	.09000	.10000
140	.07001	.08000	.09000	.10000
145	.07000	.08000	.09000	.10000
150	.07000	.08000	.09000	.10000
155	.07000	.08000	.09000	.10000
160	.07000	.08000	.09000	.10000

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	.27057	.27741	.28431	.29128
10	.16980	.17698	.18429	.19171
15	.13907	.14682	.15474	.16281
20	.12558	.13388	.14235	.15099
25	.11874	.12750	.13643	.14550
30	.11502	.12414	.13341	.14280
35	.11293	.12232	.13183	.14144
40	.11172	.12130	.13099	.14075
45	.11101	.12074	.13053	.14039
50	.11060	.12042	.13029	.14020
55	.11035	.12024	.13016	.14010
60	.11021	.12013	.13009	.14005
65	.11012	.12008	.13005	.14003
70	.11007	.12004	.13003	.14001
75	.11004	.12002	.13001	.14001
80	.11003	.12001	.13001	.14000
85	.11002	.12001	.13000	.14000
90	.11001	.12000	.13000	.14000
95	.11001	.12000	.13000	.14000
100	.11000	.12000	.13000	.14000
105	.11000	.12000	.13000	.14000
110	.11000	.12000	.13000	.14000
115	.11000	.12000	.13000	.14000
120	.11000	.12000	.13000	.14000
125	.11000	.12000	.13000	.14000
130	.11000	.12000	.13000	.14000
135	.11000	.12000	.13000	.14000
140	.11000	.12000	.13000	.14000
145	.11000	.12000	.13000	.14000
150	.11000	.12000	.13000	.14000
155	.11000	.12000	.13000	.14000
160	.11000	.12000	.13000	.14000

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TABLE 9. CAPITAL RECOVERY MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL RECOVER ORIGINAL
INVESTMENT OF ONE DOLLAR PLUS INTEREST IN N YRS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
5	.29832	.33438	.37185	.41058
10	.19925	.23852	.28007	.32346
15	.17102	.21388	.25912	.30598
20	.15976	.20536	.25292	.30159
25	.15470	.20212	.25095	.30043
30	.15230	.20085	.25031	.30011
35	.15113	.20034	.25010	.30003
40	.15056	.20014	.25003	.30001
45	.15028	.20005	.25001	.30000
50	.15014	.20002	.25000	.30000
55	.15007	.20001	.25000	.30000
60	.15003	.20000	.25000	.30000
65	.15002	.20000	.25000	.30000
70	.15001	.20000	.25000	.30000
75	.15000	.20000	.25000	.30000
80	.15000	.20000	.25000	.30000
85	.15000	.20000	.25000	.30000
90	.15000	.20000	.25000	.30000
95	.15000	.20000	.25000	.30000
100	.15000	.20000	.25000	.30000
105	.15000	.20000	.25000	.30000
110	.15000	.20000	.25000	.30000
115	.15000	.20000	.25000	.30000
120	.15000	.20000	.25000	.30000
125	.15000	.20000	.25000	.30000
130	.15000	.20000	.25000	.30000
135	.15000	.20000	.25000	.30000
140	.15000	.20000	.25000	.30000
145	.15000	.20000	.25000	.30000
150	.15000	.20000	.25000	.30000
155	.15000	.20000	.25000	.30000
160	.15000	.20000	.25000	.30000

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Table 10.--Sinking Fund Multiplier

The annual payment which will accumulate with interest to \$1 in n years.

$$\frac{i}{(1+i)^n - 1}$$

This multiplier is used to determine the annual payment (a) which will accumulate with interest to the original investment (V_o) in n years.

To find the annual payment, multiply the original investment by the multiplier:

$$a = V_o \left[\frac{i}{(1+i)^n - 1} \right]$$

Example: Determine how much should be set aside annually to provide for the replacement of a \$10,000 truck at the end of 5 years, the annual payments earning 7-percent compound interest.

Initial investment:	V_o = \$10,000
Interest rate:	i = .07
Years:	n = 5
Multiplier:	= 0.17389 (page 134)
Annual payment:	a = \$10,000 (0.17389) = \$1,738.90 per year

Notes

TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
1	1.00000	1.00000	1.00000	1.00000
2	.49875	.49751	.49628	.49505
3	.33167	.33002	.32838	.32675
4	.24813	.24628	.24444	.24262
5	.19801	.19604	.19409	.19216
6	.16460	.16255	.16053	.15853
7	.14073	.13863	.13656	.13451
8	.12283	.12069	.11858	.11651
9	.10891	.10674	.10461	.10252
10	.09777	.09558	.09343	.09133
11	.08866	.08645	.08429	.08218
12	.08107	.07885	.07668	.07456
13	.07464	.07241	.07024	.06812
14	.06914	.06690	.06472	.06260
15	.06436	.06212	.05994	.05783
16	.06019	.05794	.05577	.05365
17	.05651	.05426	.05208	.04997
18	.05323	.05098	.04881	.04670
19	.05030	.04805	.04588	.04378
20	.04767	.04542	.04325	.04116
21	.04528	.04303	.04087	.03878
22	.04311	.04086	.03870	.03663
23	.04113	.03889	.03673	.03467
24	.03932	.03707	.03492	.03287
25	.03765	.03541	.03326	.03122
26	.03611	.03387	.03173	.02970
27	.03469	.03245	.03032	.02829
28	.03336	.03112	.02900	.02699
29	.03213	.02990	.02778	.02578
30	.03098	.02875	.02664	.02465
31	.02990	.02768	.02557	.02360
32	.02889	.02667	.02458	.02261
33	.02795	.02573	.02364	.02169
34	.02706	.02484	.02276	.02082
35	.02622	.02400	.02193	.02000
36	.02542	.02321	.02115	.01923
37	.02467	.02247	.02041	.01851
38	.02396	.02176	.01972	.01782
39	.02329	.02109	.01905	.01717
40	.02265	.02046	.01843	.01656

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH
INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
1	1.00000	1.00000	1.00000	1.00000
2	.49383	.49261	.49140	.49020
3	.32514	.32353	.32193	.32035
4	.24082	.23903	.23725	.23549
5	.19025	.18835	.18648	.18463
6	.15655	.15460	.15267	.15076
7	.13250	.13051	.12854	.12661
8	.11447	.11246	.11048	.10853
9	.10046	.09843	.09645	.09449
10	.08926	.08723	.08524	.08329
11	.08011	.07808	.07609	.07415
12	.07249	.07046	.06848	.06655
13	.06605	.06403	.06206	.06014
14	.06054	.05853	.05657	.05467
15	.05577	.05377	.05183	.04994
16	.05160	.04961	.04768	.04582
17	.04793	.04595	.04404	.04220
18	.04467	.04271	.04082	.03899
19	.04176	.03981	.03794	.03614
20	.03915	.03722	.03536	.03358
21	.03679	.03487	.03304	.03128
22	.03465	.03275	.03093	.02920
23	.03270	.03081	.02902	.02731
24	.03091	.02905	.02727	.02559
25	.02928	.02743	.02567	.02401
26	.02777	.02594	.02421	.02257
27	.02638	.02456	.02285	.02124
28	.02509	.02329	.02160	.02001
29	.02389	.02211	.02045	.01888
30	.02278	.02102	.01937	.01783
31	.02174	.02000	.01837	.01686
32	.02077	.01905	.01744	.01595
33	.01986	.01816	.01657	.01510
34	.01901	.01732	.01576	.01431
35	.01821	.01654	.01500	.01358
36	.01745	.01580	.01428	.01289
37	.01674	.01511	.01361	.01224
38	.01607	.01446	.01298	.01163
39	.01544	.01384	.01239	.01106
40	.01484	.01326	.01183	.01052

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
1	1.00000	1.00000	1.00000	1.00000
2	.48900	.48780	.48662	.48544
3	.31877	.31721	.31565	.31411
4	.23374	.23201	.23029	.22859
5	.18279	.18097	.17918	.17740
6	.14888	.14702	.14518	.14336
7	.12470	.12282	.12096	.11914
8	.10661	.10472	.10286	.10104
9	.09257	.09069	.08884	.08702
10	.08138	.07950	.07767	.07587
11	.07225	.07039	.06857	.06679
12	.06467	.06283	.06103	.05928
13	.05828	.05646	.05468	.05296
14	.05282	.05102	.04928	.04758
15	.04811	.04634	.04463	.04296
16	.04402	.04227	.04058	.03895
17	.04042	.03870	.03704	.03544
18	.03724	.03555	.03392	.03236
19	.03441	.03275	.03115	.02962
20	.03188	.03024	.02868	.02718
21	.02960	.02800	.02646	.02500
22	.02755	.02597	.02447	.02305
23	.02568	.02414	.02267	.02128
24	.02399	.02247	.02104	.01968
25	.02244	.02095	.01955	.01823
26	.02102	.01956	.01819	.01690
27	.01972	.01829	.01695	.01570
28	.01852	.01712	.01581	.01459
29	.01741	.01605	.01477	.01358
30	.01639	.01505	.01381	.01265
31	.01544	.01413	.01292	.01179
32	.01456	.01328	.01210	.01100
33	.01374	.01249	.01133	.01027
34	.01298	.01176	.01063	.00960
35	.01227	.01107	.00997	.00897
36	.01161	.01043	.00937	.00839
37	.01098	.00984	.00880	.00786
38	.01040	.00928	.00827	.00736
39	.00986	.00876	.00778	.00689
40	.00934	.00828	.00732	.00646

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
1	1.00000	1.00000	1.00000	1.00000
2	.48309	.48077	.47847	.47619
3	.31105	.30803	.30505	.30211
4	.22523	.22192	.21867	.21547
5	.17389	.17046	.16709	.16380
6	.13980	.13632	.13292	.12961
7	.11555	.11207	.10869	.10541
8	.09747	.09401	.09067	.08744
9	.08349	.08008	.07680	.07364
10	.07238	.06903	.06582	.06275
11	.06336	.06008	.05695	.05396
12	.05590	.05270	.04965	.04676
13	.04965	.04652	.04357	.04078
14	.04434	.04130	.03843	.03575
15	.03979	.03683	.03406	.03147
16	.03586	.03298	.03030	.02782
17	.03243	.02963	.02705	.02466
18	.02941	.02670	.02421	.02193
19	.02675	.02413	.02173	.01955
20	.02439	.02185	.01955	.01746
21	.02229	.01983	.01762	.01562
22	.02041	.01803	.01590	.01401
23	.01871	.01642	.01438	.01257
24	.01719	.01498	.01302	.01130
25	.01581	.01368	.01181	.01017
26	.01456	.01251	.01072	.00916
27	.01343	.01145	.00973	.00826
28	.01239	.01049	.00885	.00745
29	.01145	.00962	.00806	.00673
30	.01059	.00883	.00734	.00608
31	.00980	.00811	.00669	.00550
32	.00907	.00745	.00610	.00497
33	.00841	.00685	.00556	.00450
34	.00780	.00630	.00508	.00407
35	.00723	.00580	.00464	.00369
36	.00672	.00534	.00424	.00334
37	.00624	.00492	.00387	.00303
38	.00580	.00454	.00354	.00275
39	.00539	.00419	.00324	.00249
40	.00501	.00386	.00296	.00226

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
1	1.00000	1.00000	1.00000	1.00000
2	.47393	.47170	.46948	.46729
3	.29921	.29635	.29352	.29073
4	.21233	.20923	.20619	.20320
5	.16057	.15741	.15431	.15128
6	.12638	.12323	.12015	.11716
7	.10222	.09912	.09611	.09319
8	.08432	.08130	.07839	.07557
9	.07060	.06768	.06487	.06217
10	.05980	.05698	.05429	.05171
11	.05112	.04842	.04584	.04339
12	.04403	.04144	.03899	.03667
13	.03815	.03568	.03335	.03116
14	.03323	.03087	.02867	.02661
15	.02907	.02682	.02474	.02281
16	.02552	.02339	.02143	.01962
17	.02247	.02046	.01861	.01692
18	.01984	.01794	.01620	.01462
19	.01756	.01576	.01413	.01266
20	.01558	.01388	.01235	.01099
21	.01384	.01224	.01081	.00954
22	.01231	.01081	.00948	.00830
23	.01097	.00956	.00832	.00723
24	.00979	.00846	.00731	.00630
25	.00874	.00750	.00643	.00550
26	.00781	.00665	.00565	.00480
27	.00699	.00590	.00498	.00419
28	.00626	.00524	.00439	.00366
29	.00561	.00466	.00387	.00320
30	.00502	.00414	.00341	.00280
31	.00451	.00369	.00301	.00245
32	.00404	.00328	.00266	.00215
33	.00363	.00292	.00234	.00188
34	.00326	.00260	.00207	.00165
35	.00293	.00232	.00183	.00144
36	.00263	.00206	.00162	.00126
37	.00236	.00184	.00143	.00111
38	.00213	.00164	.00126	.00097
39	.00191	.00146	.00112	.00085
40	.00172	.00130	.00099	.00075

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH
INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
1	1.00000	1.00000	1.00000	1.00000
2	.46512	.45455	.44444	.43478
3	.28798	.27473	.26230	.25063
4	.20027	.18629	.17344	.16163
5	.14832	.13438	.12185	.11058
6	.11424	.10071	.08882	.07839
7	.09036	.07742	.06634	.05687
8	.07285	.06061	.05040	.04192
9	.05957	.04808	.03876	.03124
10	.04925	.03852	.03007	.02346
11	.04107	.03110	.02349	.01773
12	.03448	.02526	.01845	.01345
13	.02911	.02062	.01454	.01024
14	.02469	.01689	.01150	.00782
15	.02102	.01388	.00912	.00598
16	.01795	.01144	.00724	.00458
17	.01537	.00944	.00576	.00351
18	.01319	.00781	.00459	.00269
19	.01134	.00646	.00366	.00207
20	.00976	.00536	.00292	.00159
21	.00842	.00444	.00233	.00122
22	.00727	.00369	.00186	.00094
23	.00628	.00307	.00148	.00072
24	.00543	.00255	.00119	.00055
25	.00470	.00212	.00095	.00043
26	.00407	.00176	.00076	.00033
27	.00353	.00147	.00061	.00025
28	.00306	.00122	.00048	.00019
29	.00265	.00102	.00039	.00015
30	.00230	.00085	.00031	.00011
31	.00200	.00070	.00025	.00009
32	.00173	.00059	.00020	.00007
33	.00150	.00049	.00016	.00005
34	.00131	.00041	.00013	.00004
35	.00113	.00034	.00010	.00003
36	.00099	.00028	.00008	.00002
37	.00086	.00024	.00006	.00002
38	.00074	.00020	.00005	.00001
39	.00065	.00016	.00004	.00001
40	.00056	.00014	.00003	.00001

U.S. DEPT. AGR., FOREST SERVICE. 1970.

TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.005	.010	.015	.020
5	.19801	.19604	.19409	.19216
10	.09777	.09558	.09343	.09133
15	.06436	.06212	.05994	.05783
20	.04767	.04542	.04325	.04116
25	.03765	.03541	.03326	.03122
30	.03098	.02875	.02664	.02465
35	.02622	.02400	.02193	.02000
40	.02265	.02046	.01843	.01656
45	.01987	.01771	.01572	.01391
50	.01765	.01551	.01357	.01182
55	.01584	.01373	.01183	.01014
60	.01433	.01224	.01039	.00877
65	.01306	.01100	.00919	.00763
70	.01197	.00993	.00817	.00667
75	.01102	.00902	.00730	.00586
80	.01020	.00822	.00655	.00516
85	.00947	.00752	.00589	.00456
90	.00883	.00690	.00532	.00405
95	.00825	.00636	.00482	.00360
100	.00773	.00587	.00437	.00320
105	.00726	.00543	.00397	.00286
110	.00684	.00503	.00362	.00255
115	.00646	.00467	.00330	.00229
120	.00610	.00435	.00302	.00205
125	.00578	.00405	.00276	.00184
130	.00548	.00378	.00253	.00165
135	.00520	.00353	.00232	.00148
140	.00495	.00330	.00213	.00133
145	.00471	.00309	.00196	.00120
150	.00449	.00290	.00180	.00108
155	.00429	.00272	.00166	.00097
160	.00409	.00256	.00153	.00088

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.025	.030	.035	.040
5	.19025	.18835	.18648	.18463
10	.08926	.08723	.08524	.08329
15	.05577	.05377	.05183	.04994
20	.03915	.03722	.03536	.03358
25	.02928	.02743	.02567	.02401
30	.02278	.02102	.01937	.01783
35	.01821	.01654	.01500	.01358
40	.01484	.01326	.01183	.01052
45	.01227	.01079	.00945	.00826
50	.01026	.00887	.00763	.00655
55	.00865	.00735	.00621	.00523
60	.00735	.00613	.00509	.00420
65	.00628	.00515	.00419	.00339
70	.00540	.00434	.00346	.00275
75	.00465	.00367	.00287	.00223
80	.00403	.00311	.00238	.00181
85	.00349	.00265	.00199	.00148
90	.00304	.00226	.00166	.00121
95	.00265	.00193	.00139	.00099
100	.00231	.00165	.00116	.00081
105	.00202	.00141	.00097	.00066
110	.00177	.00121	.00081	.00054
115	.00155	.00104	.00068	.00044
120	.00136	.00089	.00057	.00036
125	.00120	.00076	.00048	.00030
130	.00105	.00066	.00040	.00025
135	.00092	.00057	.00034	.00020
140	.00081	.00049	.00029	.00017
145	.00072	.00042	.00024	.00014
150	.00063	.00036	.00020	.00011
155	.00056	.00031	.00017	.00009
160	.00049	.00027	.00014	.00008

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.045	.050	.055	.060
5	.18279	.18097	.17918	.17740
10	.08138	.07950	.07767	.07587
15	.04811	.04634	.04463	.04296
20	.03188	.03024	.02868	.02718
25	.02244	.02095	.01955	.01823
30	.01639	.01505	.01381	.01265
35	.01227	.01107	.00997	.00897
40	.00934	.00828	.00732	.00646
45	.00720	.00626	.00543	.00470
50	.00560	.00478	.00406	.00344
55	.00439	.00367	.00305	.00254
60	.00345	.00283	.00231	.00188
65	.00273	.00219	.00175	.00139
70	.00217	.00170	.00133	.00103
75	.00172	.00132	.00101	.00077
80	.00137	.00103	.00077	.00057
85	.00109	.00080	.00059	.00043
90	.00087	.00063	.00045	.00032
95	.00070	.00049	.00034	.00024
100	.00056	.00038	.00026	.00018
105	.00045	.00030	.00020	.00013
110	.00036	.00023	.00015	.00010
115	.00029	.00018	.00012	.00007
120	.00023	.00014	.00009	.00006
125	.00018	.00011	.00007	.00004
130	.00015	.00009	.00005	.00003
135	.00012	.00007	.00004	.00002
140	.00010	.00005	.00003	.00002
145	.00008	.00004	.00002	.00001
150	.00006	.00003	.00002	.00001
155	.00005	.00003	.00001	.00001
160	.00004	.00002	.00001	.00001

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.070	.080	.090	.100
5	.17389	.17046	.16709	.16380
10	.07238	.06903	.06582	.06275
15	.03979	.03683	.03406	.03147
20	.02439	.02185	.01955	.01746
25	.01581	.01368	.01181	.01017
30	.01059	.00883	.00734	.00608
35	.00723	.00580	.00464	.00369
40	.00501	.00386	.00296	.00226
45	.00350	.00259	.00190	.00139
50	.00246	.00174	.00123	.00086
55	.00174	.00118	.00079	.00053
60	.00123	.00080	.00051	.00033
65	.00087	.00054	.00033	.00020
70	.00062	.00037	.00022	.00013
75	.00044	.00025	.00014	.00008
80	.00031	.00017	.00009	.00005
85	.00022	.00012	.00006	.00003
90	.00016	.00008	.00004	.00002
95	.00011	.00005	.00003	.00001
100	.00008	.00004	.00002	.00001
105	.00006	.00002	.00001	.00000
110	.00004	.00002	.00001	.00000
115	.00003	.00001	.00000	.00000
120	.00002	.00001	.00000	.00000
125	.00001	.00001	.00000	.00000
130	.00001	.00000	.00000	.00000
135	.00001	.00000	.00000	.00000
140	.00001	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

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TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH
INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.110	.120	.130	.140
5	.16057	.15741	.15431	.15128
10	.05980	.05698	.05429	.05171
15	.02907	.02682	.02474	.02281
20	.01558	.01388	.01235	.01099
25	.00874	.00750	.00643	.00550
30	.00502	.00414	.00341	.00280
35	.00293	.00232	.00183	.00144
40	.00172	.00130	.00099	.00075
45	.00101	.00074	.00053	.00039
50	.00060	.00042	.00029	.00020
55	.00035	.00024	.00016	.00010
60	.00021	.00013	.00009	.00005
65	.00012	.00008	.00005	.00003
70	.00007	.00004	.00003	.00001
75	.00004	.00002	.00001	.00001
80	.00003	.00001	.00001	.00000
85	.00002	.00001	.00000	.00000
90	.00001	.00000	.00000	.00000
95	.00001	.00000	.00000	.00000
100	.00000	.00000	.00000	.00000
105	.00000	.00000	.00000	.00000
110	.00000	.00000	.00000	.00000
115	.00000	.00000	.00000	.00000
120	.00000	.00000	.00000	.00000
125	.00000	.00000	.00000	.00000
130	.00000	.00000	.00000	.00000
135	.00000	.00000	.00000	.00000
140	.00000	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

TABLE 10. SINKING FUND MULTIPLIER
THE ANNUAL PAYMENT WHICH WILL ACCUMULATE WITH INTEREST TO ONE DOLLAR IN N YEARS

	RATE OF INTEREST			
YEARS	.150	.200	.250	.300
5	.14832	.13438	.12185	.11058
10	.04925	.03852	.03007	.02346
15	.02102	.01388	.00912	.00598
20	.00976	.00536	.00292	.00159
25	.00470	.00212	.00095	.00043
30	.00230	.00085	.00031	.00011
35	.00113	.00034	.00010	.00003
40	.00056	.00014	.00003	.00001
45	.00028	.00005	.00001	.00000
50	.00014	.00002	.00000	.00000
55	.00007	.00001	.00000	.00000
60	.00003	.00000	.00000	.00000
65	.00002	.00000	.00000	.00000
70	.00001	.00000	.00000	.00000
75	.00000	.00000	.00000	.00000
80	.00000	.00000	.00000	.00000
85	.00000	.00000	.00000	.00000
90	.00000	.00000	.00000	.00000
95	.00000	.00000	.00000	.00000
100	.00000	.00000	.00000	.00000
105	.00000	.00000	.00000	.00000
110	.00000	.00000	.00000	.00000
115	.00000	.00000	.00000	.00000
120	.00000	.00000	.00000	.00000
125	.00000	.00000	.00000	.00000
130	.00000	.00000	.00000	.00000
135	.00000	.00000	.00000	.00000
140	.00000	.00000	.00000	.00000
145	.00000	.00000	.00000	.00000
150	.00000	.00000	.00000	.00000
155	.00000	.00000	.00000	.00000
160	.00000	.00000	.00000	.00000

SOME RECENT RESEARCH PAPERS OF THE NORTH CENTRAL FOREST EXPERIMENT STATION

Biological Growth Functions Describe Published Site Index Curves for Lake States Timber Species, by Allen L. Lundgren and William A. Dolid. USDA Forest Serv. Res. Pap. NC-36, 9 p., illus. 1970.

Defect Indicators in Sugar Maple – A Photographic Guide, by Richard M. Marden, and Charles L. Stayton. USDA Forest Serv. Res. Pap. NC-37, 29 p., illus. 1970.

Estimating Sugar Maple Bark Thickness and Volume, by Charles L. Stayton and Michael Hoffman. USDA Forest Serv. Res. Pap. NC-38, 8 p., illus. 1970.

White-Tailed Deer in the Midwest, A Symposium. USDA Forest Serv. Res. Pap. NC-39, 34 p., illus. 1970.

Tree Improvement Opportunities in the North-Central States Related to Economic Trends, A Problem Analysis, by David H. Dawson and John A. Pitcher. USDA Forest Serv. Res. Pap. NC-40, 30 p., illus. 1970.

Relation Between the National Fire Danger Spread Component and Fire Activity in the Lake States, by Donald A. Haines, William A. Main, and Von J. Johnson. USDA Forest Serv. Res. Pap. NC-41, 8 p., illus. 1970.

Thinning and Fertilizing Red Pine to Increase Growth and Cone Production, by John H. Cooley. USDA Forest Serv. Res. Pap. NC-42, 8 p., illus. 1970.

The Impact of Estimation Errors on Evaluations of Timber Production Opportunities, by Dennis L. Schweitzer. USDA Forest Serv. Res. Pap. NC-43, 18 p., illus. 1970.

User Evaluation of Campgrounds on Two Michigan National Forests, by Robert C. Lucas. USDA Forest Serv. Res. Pap. NC-44, 15 p., illus. 1970.

System Identification Principles in Studies of Forest Dynamics, by Rolfe A. Leary. USDA Forest Serv. Res. Pap. NC-45, 38 p., illus. 1970.

Skiing in the Great Lakes States: the Industry and the Skier, by William A. Leuschner. USDA Forest Serv. Res. Pap. NC-46, 42 p., illus. 1970.

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As our Nation grows, people expect and need more from their forests — more wood; more water, fish, and wildlife; more recreation and natural beauty; more special forest products and forage. The Forest Service of the U.S. Department of Agriculture helps to fulfill these expectations and needs through three major activities:

- Conducting forest and range research at over 75 locations ranging from Puerto Rico to Alaska to Hawaii.
- Participating with all State forestry agencies in cooperative programs to protect, improve, and wisely use our Country's 395 million acres of State, local, and private forest lands.
- Managing and protecting the 187-million acre National Forest System.

The Forest Service does this by encouraging use of the new knowledge that research scientists develop; by setting an example in managing, under sustained yield, the National Forests and Grasslands for multiple use purposes; and by cooperating with all States and with private citizens in their efforts to achieve better management, protection, and use of forest resources.

Traditionally, Forest Service people have been active members of the communities and towns in which they live and work. They strive to secure for all, continuous benefits from the Country's forest resources.

For more than 60 years, the Forest Service has been serving the Nation as a leading natural resource conservation agency.